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(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
5 April 2001 (05.04.2001)

PCT

(10) International Publication Number  
**WO 01/22920 A2**

(51) International Patent Classification<sup>7</sup>: **A61K**

(21) International Application Number: PCT/US00/26524

(22) International Filing Date:  
28 September 2000 (28.09.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/157,137 29 September 1999 (29.09.1999) US  
60/163,280 3 November 1999 (03.11.1999) US

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(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

**Published:**

— Without international search report and to be republished upon receipt of that report.

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.



**WO 01/22920 A2**

(54) Title: COLON AND COLON CANCER ASSOCIATED POLYNUCLEOTIDES AND POLYPEPTIDES

(57) Abstract: This invention relates to newly identified colon or colon cancer related polynucleotides and the polypeptides encoded by these polynucleotides herein collectively known as "colon cancer antigens", and the use of such colon cancer antigens for targeting specific cell types and/or diagnosing, detecting, preventing and treating disorders of the colon, particularly the presence of colon cancer and colon cancer metastases. This invention relates to colon cancer antigens as well as vectors, host cells, antibodies directed to colon cancer antigens and the recombinant or synthetic methods for producing the same. Also provided are diagnostic methods for diagnosing and treating, preventing and/or prognosing disorders related to the colon, including colon cancer, and therapeutic methods for treating such disorders. The invention further relates to screening methods for identifying agonists and antagonists of colon cancer antigens of the invention. The present invention further relates to inhibiting the production and function of the polypeptides of the present invention.

## Colon and Colon Cancer Associated Polynucleotides and Polypeptides

### *Field of the Invention*

5

This invention relates to newly identified colon or colon cancer related polynucleotides and the polypeptides encoded by these polynucleotides herein collectively known as "colon cancer antigens," and the use of such colon cancer antigens for targeting specific cell types and/or diagnosing, detecting, preventing and treating disorders of the colon, particularly the presence of colon cancer and colon cancer metastases. This invention relates to colon cancer antigens as well as vectors, host cells, antibodies directed to colon cancer antigens and the recombinant or synthetic methods for producing the same. Also provided are diagnostic methods for diagnosing and treating, preventing and/or prognosing disorders related to the colon, including colon cancer, and therapeutic methods for treating such disorders. The invention further relates to screening methods for identifying agonists and antagonists of colon cancer antigens of the invention. The present invention further relates to inhibiting the production and function of the polypeptides of the present invention.

20

### *Background of the Invention*

Cell growth is a carefully regulated process which responds to specific needs of the body. Occasionally, the intricate, and highly regulated controls dictating the rules for cellular division break down. When this occurs, the cell begins to grow and divide independently of its homeostatic regulation resulting in a condition commonly referred to as cancer. In fact, cancer is the second leading cause of death among Americans aged 25-44.

Colorectal cancers are among the most common cancers in men and women in the U.S. and are one of the leading causes of death. Other than surgical resection no other systemic or adjuvant therapy is available. Vogelstein and colleagues have described the sequence of genetic events that appear to be associated with the multistep process of colon cancer development in humans (Trends Genet 9(4):138-41 (1993)). An understanding of the molecular genetics of carcinogenesis, however, has not led to preventative or therapeutic measures. It can be expected that advances in molecular genetics will lead to better risk

assessment and early diagnosis but colorectal cancers will remain a deadly disease for a majority of patients due to the lack of an adjuvant therapy. Adjuvant or systemic treatments are likely to arise from a better understanding of the autocrine factors responsible for the continued proliferation of cancer cells.

5           Colorectal carcinoma is a malignant neoplastic disease. There is a high incidence of colorectal carcinoma in the Western world, particularly in the United States. Tumors of this type often metastasize through lymphatic and vascular channels. Many patients with colorectal carcinoma eventually die from this disease. In fact, it is estimated that 62,000 persons in the United States alone die of colorectal carcinoma annually.

10           At the present time the only systemic treatment available for colon cancer is chemotherapy. However, chemotherapy has not proven to be very effective for the treatment of colon cancers for several reasons, the most important of which is the fact that colon cancers express high levels of the MDR gene (that codes for multi-drug resistance gene products). The MDR gene products actively transport the toxic substances out of the cell  
15 before the chemotherapeutic agents can damage the DNA machinery of the cell. These toxic substances harm the normal cell populations more than they harm the colon cancer cells for the above reasons.

          There is no effective systemic treatment for treating colon cancers other than surgically removing the cancers. In the case of several other cancers, including breast  
20 cancers, the knowledge of growth promoting factors (such as EGF, estradiol, IGF-11) that appear to be expressed or effect the growth of the cancer cells, has been translated for treatment purposes. But in the case of colon cancers this knowledge has not been applied and therefore the treatment outcome for colon cancers remains bleak.

          Thus, the discovery of new human colon and colon cancer related polynucleotides  
25 and the polypeptides encoded by them satisfies a need in the art by providing new compositions which are useful in the diagnosis, prevention and treatment of disorders of the colon, particularly tumors, especially of the intestine; inflammatory disorders; enterocolitis; miscellaneous intestinal inflammatory disorders; ulcerative disorders; and/or noncancerous tumors.

30

### ***Summary of the Invention***

This invention relates to newly identified colon and colon cancer related polynucleotides and the polypeptides encoded by these polynucleotides herein collectively known as "colon cancer antigens." This invention relates to colon and colon cancer related polypeptides as well as vectors, host cells, antibodies directed to colon cancer antigens and the recombinant methods for producing the same. Also provided are diagnostic methods for diagnosing and treating, preventing and/or prognosing disorders related to the colon, including colon cancer, and therapeutic methods for treating such disorders. The invention further relates to screening methods for identifying agonists and antagonists of colon cancer antigens of the invention.

### ***Detailed Description***

#### **Tables**

Table 1 summarizes some of the colon cancer antigens encompassed by the invention (including cDNA clones related to the sequences (Clone ID NO:Z), polynucleotide sequences (contig identifier (Contig ID:) or sequence identifier (Sequence ID:) and nucleotide sequence identifier (SEQ ID NO:X)) and further summarizes certain characteristics of the colon and colon cancer related polynucleotides and the polypeptides encoded thereby. The first column shows the "SEQ ID NO:X" for each of the 4277 colon and colon cancer related polynucleotide sequences of the invention. The second column provides a unique "Sequence/Contig ID" identification for each of the colon and colon cancer related polynucleotide and/or polypeptide sequences. The third column, "Gene Name," and the fourth column, "Overlap," provide a putative identification of the gene based on the sequence similarity of its translation product to an amino acid sequence found in a publicly accessible gene database and the database accession no. for the database sequence having similarity, respectively. The sixth and seventh columns provide the location (nucleotide position nos. within the sequence/contig), "Start" and "End", in the polynucleotide sequence "SEQ ID NO:X" that delineate the preferred ORF shown in the sequence listing as SEQ ID NO:Y (column five). The eighth and ninth columns provide the "%Id" (percent identity) and "%Si" (percent similarity), respectively, observed between the aligned sequence segments of the translation product of SEQ ID NO:X and the database sequence. The tenth column provides a

unique "Clone ID:Z" for a cDNA clone related to each contig sequence. The eleventh column provides the "Cloning vector" contained in the cDNA clone ID.

Table 2 summarizes ATCC Deposits, Deposit dates, and ATCC designation numbers of deposits made with the ATCC in connection with the present application.

5        Table 3 summarizes the expression profile of polynucleotides corresponding to the clones disclosed in Table 1. The first column provides a unique clone identifier, "Clone ID", for a cDNA clone related to each contig sequence disclosed in Table 1. Column 2, "Library Codes" shows the expression profile of tissue and/or cell line libraries which express the polynucleotides of the invention. Each Library Code in column 2 represents a tissue/cell  
10        source identifier code corresponding to the Library Code and Library description provided in Table 5. Expression of these polynucleotides was not observed in the other tissues and/or cell libraries tested. One of skill in the art could routinely use this information to identify tissues which show a predominant expression pattern of the corresponding polynucleotide of the invention or to identify polynucleotides which show predominant and/or specific tissue  
15        expression.

Table 4, column 1, provides a nucleotide sequence identifier, "SEQ ID NO:X," that matches a nucleotide SEQ ID NO:X disclosed in Table 1, column 5. Table 4, column 2, provides the chromosomal location, "Cytologic Band or Chromosome," of polynucleotides corresponding to SEQ ID NO:X. Chromosomal location was determined by finding exact  
20        matches to EST and cDNA sequences contained in the NCBI (National Center for Biotechnology Information) UniGene database. Given a presumptive chromosomal location, disease locus association was determined by comparison with the Morbid Map, derived from Online Mendelian Inheritance in Man (Online Mendelian Inheritance in Man, OMIM™. McKusick-Nathans Institute for Genetic Medicine, Johns Hopkins University (Baltimore, MD) and National Center for Biotechnology Information, National Library of Medicine  
25        (Bethesda, MD) 2000. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>). If the putative chromosomal location of the Query overlapped with the chromosomal location of a Morbid Map entry, the OMIM reference identification number of the morbid map entry is provided in Table 4, column 3, labelled "OMIM ID." A key to the OMIM reference  
30        identification numbers is provided in Table 6.

Table 5 provides a key to the Library Code disclosed in Table 3. Column 1 provides the Library Code disclosed in Table 3, column 2. Column 2 provides a description of the tissue or cell source from which the corresponding library was derived.

Table 6 provides a key to the OMIM reference identification numbers disclosed in Table 4, column 3. OMIM reference identification numbers (Column 1) were derived from Online Mendelian Inheritance in Man (Online Mendelian Inheritance in Man, OMIM. McKusick-Nathans Institute for Genetic Medicine, Johns Hopkins University (Baltimore, MD) and National Center for Biotechnology Information, National Library of Medicine, (Bethesda, MD) 2000. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>). Column 2 provides diseases associated with the cytologic band disclosed in Table 4, column 2, as determined using the Morbid Map database.

Table 7 indicates public ESTs, of which at least one, two, three, four, five, ten, fifteen or more of any one or more of these public EST sequences are optionally excluded from certain embodiments of the invention.

Table 8 lists residues comprising antigenic epitopes of antigenic epitope-bearing fragments present in each of the preferred ORFs (SEQ ID NO:Y) encoded by the colon or colon cancer related polynucleotides described in Table 1 as predicted by the inventors using the algorithm of Jameson and Wolf, (1988) Comp. Appl. Biosci. 4:181-186. The Jameson-Wolf antigenic analysis was performed using the computer program PROTEAN (Version 3.11 for the Power MacIntosh, DNASTAR, Inc., 1228 South Park Street Madison, WI). Colon and/or colon cancer related polypeptides shown in Table 1 may possess one or more antigenic epitopes comprising residues described in Table 8. It will be appreciated that depending on the analytical criteria used to predict antigenic determinants, the exact address of the determinant may vary slightly. The residues and locations shown described in Table 8 correspond to the amino acid sequences for each colon and/or colon cancer related polypeptide sequence shown in the Sequence Listing.

Table 9 shows the cDNA libraries sequenced, and ATCC designation numbers and vector information relating to these cDNA libraries.

### 30 **Definitions**

The following definitions are provided to facilitate understanding of certain terms used throughout this specification.

In the present invention, "isolated" refers to material removed from its original environment (e.g., the natural environment if it is naturally occurring), and thus is altered "by the hand of man" from its natural state. For example, an isolated polynucleotide could be part of a vector or a composition of matter, or could be contained within a cell, and still be "isolated" because that vector, composition of matter, or particular cell is not the original environment of the polynucleotide. The term "isolated" does not refer to genomic or cDNA libraries, whole cell total or mRNA preparations, genomic DNA preparations (including those separated by electrophoresis and transferred onto blots), sheared whole cell genomic DNA preparations or other compositions where the art demonstrates no distinguishing features of the polynucleotide/sequences of the present invention.

As used herein, a "polynucleotide" refers to a molecule having a nucleic acid sequence contained in SEQ ID NO:X or the cDNA clone deposited with the ATCC. For example, the polynucleotide can contain the nucleotide sequence of the full length cDNA sequence, including the 5' and 3' untranslated sequences, the coding region, as well as fragments, epitopes, domains, and variants of the nucleic acid sequence. Moreover, as used herein, a "polypeptide" refers to a molecule having the translated amino acid sequence generated from the polynucleotide as broadly defined.

In the present invention, "SEQ ID NO:X" was often generated by overlapping sequences contained in multiple clones (contig analysis). A representative clone containing all or most of the sequence for SEQ ID NO:X is deposited at Human Genome Sciences, Inc. (HGS) in a catalogued and archived library. As shown in Table 1, each clone is identified by a cDNA Clone ID (Identifier). Each Clone ID is unique to an individual clone and the Clone ID is all the information needed to retrieve a given clone from the HGS library. In addition to the individual cDNA clone deposits, the cDNA clones were deposited at the American Type Culture Collection (hereinafter "ATCC"). As mentioned below, Table 1 correlates the Clone ID names with SEQ ID NOs. Furthermore, it is possible to retrieve a given cDNA clone from the ATCC deposit by techniques known in the art and described elsewhere herein. The ATCC is located at 10801 University Boulevard, Manassas, Virginia 20110-2209, USA. The ATCC deposits were made pursuant to the terms of the Budapest Treaty on the international recognition of the deposit of microorganisms for the purposes of patent procedure.

In specific embodiments, the polynucleotides of the invention are at least 15, at least 30, at least 50, at least 100, at least 125, at least 500, or at least 1000 continuous nucleotides but are less than or equal to 300 kb, 200 kb, 100 kb, 50 kb, 15 kb, 10 kb, 7.5kb, 5 kb, 2.5 kb, 2.0 kb, or 1 kb, in length. In a further embodiment, polynucleotides of the invention  
5 comprise a portion of the coding sequences, as disclosed herein, but do not comprise all or a portion of any intron. In another embodiment, the polynucleotides comprising coding sequences do not contain coding sequences of a genomic flanking gene (i.e., 5' or 3' to the gene of interest in the genome). In other embodiments, the polynucleotides of the invention do not contain the coding sequence of more than 1000, 500, 250, 100, 50, 25, 20, 15, 10, 5, 4,  
10 3, 2, or 1 genomic flanking gene(s).

A "polynucleotide" of the present invention also includes those polynucleotides capable of hybridizing, under stringent hybridization conditions, to sequences contained in SEQ ID NO:X, the complement thereof, or the cDNA clone within the pool of cDNA clones deposited with the ATCC. "Stringent hybridization conditions" refers to an overnight  
15 incubation at 42 degree C in a solution comprising 50% formamide, 5x SSC (750 mM NaCl, 75 mM trisodium citrate), 50 mM sodium phosphate (pH 7.6), 5x Denhardt's solution, 10% dextran sulfate, and 20 µg/ml denatured, sheared salmon sperm DNA, followed by washing the filters in 0.1x SSC at about 65 degree C.

Also contemplated are nucleic acid molecules that hybridize to the polynucleotides of  
20 the present invention at lower stringency hybridization conditions. Changes in the stringency of hybridization and signal detection are primarily accomplished through the manipulation of formamide concentration (lower percentages of formamide result in lowered stringency); salt conditions, or temperature. For example, lower stringency conditions include an overnight incubation at 37 degree C in a solution comprising 6X SSPE (20X SSPE = 3M NaCl; 0.2M  
25 NaH<sub>2</sub>PO<sub>4</sub>; 0.02M EDTA, pH 7.4), 0.5% SDS, 30% formamide, 100 ug/ml salmon sperm blocking DNA; followed by washes at 50 degree C with 1XSSPE, 0.1% SDS. In addition, to achieve even lower stringency, washes performed following stringent hybridization can be done at higher salt concentrations (e.g. 5X SSC).

Note that variations in the above conditions may be accomplished through the  
30 inclusion and/or substitution of alternate blocking reagents used to suppress background in hybridization experiments. Typical blocking reagents include Denhardt's reagent, BLOTTO, heparin, denatured salmon sperm DNA, and commercially available proprietary formulations.



The inclusion of specific blocking reagents may require modification of the hybridization conditions described above, due to problems with compatibility.

Of course, a polynucleotide which hybridizes only to polyA<sup>+</sup> sequences (such as any 3' terminal polyA<sup>+</sup> tract of a cDNA shown in the sequence listing), or to a complementary stretch of T (or U) residues, would not be included in the definition of "polynucleotide," since  
5 such a polynucleotide would hybridize to any nucleic acid molecule containing a poly (A) stretch or the complement thereof (e.g., practically any double-stranded cDNA clone generated using oligo dT as a primer).

The polynucleotide of the present invention can be composed of any  
10 polyribonucleotide or polydeoxribonucleotide, which may be unmodified RNA or DNA or modified RNA or DNA. For example, polynucleotides can be composed of single- and double-stranded DNA, DNA that is a mixture of single- and double-stranded regions, single- and double-stranded RNA, and RNA that is mixture of single- and double-stranded regions, hybrid molecules comprising DNA and RNA that may be single-stranded or, more typically,  
15 double-stranded or a mixture of single- and double-stranded regions. In addition, the polynucleotide can be composed of triple-stranded regions comprising RNA or DNA or both RNA and DNA. A polynucleotide may also contain one or more modified bases or DNA or RNA backbones modified for stability or for other reasons. "Modified" bases include, for example, tritylated bases and unusual bases such as inosine. A variety of modifications can  
20 be made to DNA and RNA; thus, "polynucleotide" embraces chemically, enzymatically, or metabolically modified forms.

The polypeptide of the present invention can be composed of amino acids joined to each other by peptide bonds or modified peptide bonds, i.e., peptide isosteres, and may contain amino acids other than the 20 gene-encoded amino acids. The polypeptides may be  
25 modified by either natural processes, such as posttranslational processing, or by chemical modification techniques which are well known in the art. Such modifications are well described in basic texts and in more detailed monographs, as well as in a voluminous research literature. Modifications can occur anywhere in a polypeptide, including the peptide backbone, the amino acid side-chains and the amino or carboxyl termini. It will be  
30 appreciated that the same type of modification may be present in the same or varying degrees at several sites in a given polypeptide. Also, a given polypeptide may contain many types of modifications. Polypeptides may be branched, for example, as a result of ubiquitination, and

they may be cyclic, with or without branching. Cyclic, branched, and branched cyclic polypeptides may result from posttranslation natural processes or may be made by synthetic methods. Modifications include acetylation, acylation, ADP-ribosylation, amidation, covalent attachment of flavin, covalent attachment of a heme moiety, covalent attachment of a nucleotide or nucleotide derivative, covalent attachment of a lipid or lipid derivative, covalent attachment of phosphatidylinositol, cross-linking, cyclization, disulfide bond formation, demethylation, formation of covalent cross-links, formation of cysteine, formation of pyroglutamate, formylation, gamma-carboxylation, glycosylation, GPI anchor formation, hydroxylation, iodination, methylation, myristoylation, oxidation, pegylation, proteolytic processing, phosphorylation, prenylation, racemization, selenoylation, sulfation, transfer-RNA mediated addition of amino acids to proteins such as arginylation, and ubiquitination. (See, for instance, PROTEINS - STRUCTURE AND MOLECULAR PROPERTIES, 2nd Ed., T. E. Creighton, W. H. Freeman and Company, New York (1993); POSTTRANSLATIONAL COVALENT MODIFICATION OF PROTEINS, B. C. Johnson, Ed., Academic Press, New York, pgs. 1-12 (1983); Seifter et al., Meth Enzymol 182:626-646 (1990); Rattan et al., Ann NY Acad Sci 663:48-62 (1992).)

"SEQ ID NO:X" refers to a polynucleotide sequence while "SEQ ID NO:Y" refers to a polypeptide sequence. SEQ ID NO:X is identified by an integer specified in column 1 of Table 1. A translated open reading frame (ORF) encoded by polynucleotide SEQ ID NO:X, SEQ ID NO:Y, is shown in column nine of Table 1. There are 4277 colon and/or colon cancer related polynucleotide sequences described in Table 1 and shown in the sequence listing. Likewise there are 4277 colon and/or colon cancer related polypeptide sequences shown in the sequence listing, one polypeptide sequence for each of the polynucleotide sequences. The polynucleotide sequences are shown in the sequence listing immediately followed by all of the polypeptide sequences.

"A polypeptide having biological activity" refers to polypeptides exhibiting activity similar, but not necessarily identical to, an activity of a polypeptide of the present invention, including mature forms, as measured in a particular biological assay, with or without dose dependency. In the case where dose dependency does exist, it need not be identical to that of the polypeptide, but rather substantially similar to the dose-dependence in a given activity as compared to the polypeptide of the present invention (i.e., the candidate polypeptide will exhibit greater activity or not more than about 25-fold less and, preferably, not more than

about tenfold less activity, and most preferably, not more than about three-fold less activity relative to the polypeptide of the present invention).

The polynucleotides of the invention may be arrayed onto a nitrocellulose filter and screened with labelled mRNA which has been isolated from particular normal or diseased tissues, as described in Example 3. Known polynucleotide sequences are included in the array as hybridization controls, either because of their demonstrated tissue specificity or because they represent known surface molecules which may after further study show a predominant tissue expression and be useful antibody targets.

#### 10 **Colon and/or Colon Cancer Related Polynucleotides and Polypeptides of the Invention**

It has been discovered herein that the polynucleotides described in Table 1 are expressed at significantly enhanced levels in human colon and colon cancer tissues. Accordingly, such polynucleotides, polypeptides encoded by such polynucleotides, and antibodies specific for such polypeptides find use in the prediction, diagnosis, treatment, and prevention of disorders related to the colon, including, but not limited to colon cancer, as more fully described below.

Table 1 summarizes some of the polynucleotides encompassed by the invention (including polynucleotide sequences (SEQ ID NO:X) and the related cDNA clones (Clone ID:Z)) and further summarizes certain characteristics of these colon and/or colon cancer related polynucleotides, and the polypeptides encoded thereby.

Table 1

Seq ID No:X	Sequence/Contig ID	Gene Name	Overlap	AA SEQ ID No:Y	HGS Nucleotide Start	HGS Nucleotide End	% Id	% Si	Clone ID:Z	Vector
1	390631	(AF051311) Ras-GAP SH3 binding protein [Homo sapiens] >sp O60606 O60606 RAS-GAP SH3 BINDING PROTEIN. Length = 449	gb AAC15705.1	4278	3	326	96	96	HTWEP07	pSport1
2	410299			4279	75	251			HODBA26	Uni-ZAP XR
3	456200			4280	3	443			HPMEF95	Uni-ZAP XR
4	456438	hypothetical protein (LIH 3" region) - human Length = 1280	pir B34087 B34087	4281	1	513	43	58	HCFCY21	pSport1
5	467315			4282	278	412			HMKCO08	pSport1
6	471563			4283	8	181			HBAGS04	pSport1
7	488131			4284	148	342			HALSQ75	Uni-ZAP XR
8	490848			4285	241	522			HMVBD21	pSport1
9	500696	Similar to Volbox carteri extensin (S22697) [Homo sapiens] >gb AAD33052.1 AF134303_1 (AF134303) Scar1 [Homo sapiens] >sp Q92558 Y269_HUMAN HYPOTHIETICAL PROLINE-RICH PROTEIN KIAA0269. >sp AAD33052 AAD33052 Scar1. Length = 559	dbj BAA13399.1	4286	2	187	78	78	HKIMD67	Lambda ZAP II
10	504559			4287	66	152			HOOAE34	pBluescript
11	506406			4288	34	420			HHSDD62	Uni-ZAP XR
12	506619			4289	85	1119			HSLGZ32	Uni-ZAP XR
13	507852			4290	211	456			HCENL15	Uni-ZAP XR
14	509423			4291	540	755			HCQA138	Lambda ZAP II

15	509734				4292	197	316			HPMDT48	Uni-ZAP XR
16	509856				4293	172	345			HADFX66	pSport1
17	524721				4294	318	434			HONAI01	pBluescript SK-
18	524901				4295	508	819			HEBBT54	Uni-ZAP XR
19	527600				4296	11	232			H2CBG63	pBluescript SK-
20	527827				4297	159	1			HHSBA79	Uni-ZAP XR
21	529050				4298	224	388			HCQAQ89	Lambda ZAP II
22	529465				4299	241	363			HELJ91	Uni-ZAP XR
23	530612				4300	3	239			HADBE91	Uni-ZAP XR
24	530773				4301	250	450			HSAAX52	pBluescript SK-
25	532810	long-chain acyl-CoA synthetase [Homo sapiens] >pir JX0202 JX0202 long-chain-fatty-acid--CoA ligase (EC 6.2.1.3) - human >sp P33121 LCFB_HUMAN LONG-CHAIN-FATTY-ACID--COA LIGASE 2 (EC 6.2.1.3) (LONG-CHAIN ACYL-COA SYNTHETASE 2) (LACS 2). Length = 698	dbj BAA00931.1		4302	2	403	100	100	HACCE33	Uni-ZAP XR
26	533242	5-aminolevulinate synthase precursor [Homo sapiens] >emb CAA15886.1  (AL020991) dJ884M20.2 [Homo sapiens] >gb AAC39838.1  (AF068624) 5-aminolevulinate synthase 2 [Homo sapiens] >pir S16347 SYHUA5 5-aminolevulinate synthase (EC 2.3.1.37) precursor, erythro	emb CAA4291.6.1		4303	562	1626	100	100	HE8DA85	Uni-ZAP XR

27	541126	guanylate binding protein isoform I [Homo sapiens] >pir A41268 A41268 guanine nucleotide-binding protein 1 - human >sp P32455 GBP1_HUMAN INTERFERON-INDUCED GUANYLATE- BINDING PROTEIN 1 (GUANINE NUCLEOTIDE- BINDING PROTEIN 1). Length = 592	gb AAA35871.1	4304	140	622	92	93	HSKII86	pBluescript
28	542268			4305	259	585			HUSGI39	pSport1
29	547920	aspartyl-tRNA synthetase [Homo sapiens] >pir A34393 SYHUT aspartate--tRNA ligase (EC 6.1.1.12) - human >sp P14868 SYD_HUMAN ASPARTYL-TRNA SYNTHETASE (EC 6.1.1.12) (ASPARTATE--TRNA LIGASE) (ASPRS). Length = 500	gb AAA35567.1	4306	133	240	100	100	HKIMB44	Lambda ZAP II
30	549642			4307	345	611			HBMV162	Uni-ZAP XR
31	550207			4308	184	390			HBXFC78	ZAP Express
32	552115			4309	41	262			HE2FR32	Uni-ZAP XR
33	552465	(AL050037) hypothetical protein [Homo sapiens] >emb CAB43247.1 (AL050037) hypothetical protein [Homo sapiens] >pir T08715 T08715 hypothetical protein DKFZp566I1024.1 - human (fragment) >sp Q9Y405 Q9Y405 HYPOTHETICAL 34.8 KD PROTEIN (FRAGMENT). Length = 3	emb CAB43247.1	4310	696	1208	80	81	HKACD58	pCMVSPORT 2.0
34	554369	precursor polypeptide (AA -29 to 315) [Homo sapiens] >pir S14902 DEHUMT methylenetetrahydrofolate dehydrogenase (NAD+) (EC 1.5.1.15) / methylenetetrahydrofolate cyclohydrolase (EC 3.5.4.9) precursor - human >sp P13995 MTDC_HUMAN BIFUNCTIONAL METHYLENETETRA	emb CAA34431.1	4311	208	339	77	82	HDAAB62	pSport1

35	557152				4312	379	600			HEPBA24	Uni-ZAP XR
36	557230				4313	222	530			HOGBL08	pCMVSPORT 2.0
37	558366	rTsbeta [Homo sapiens] >sp Q15407 Q15407 RTSBETA. Length = 416	emb CAA6176 1.1	4314	2	379	97	97		HCYBD62	pBluescript SK-
38	570796	protein [Homo sapiens] >sp Q14288 Q14288 HYPOTHETICAL PROTEIN (FRAGMENT). Length = 641	gb AAA88038. 1	4315	773	889	51	63		H2CBD20	pBluescript SK-
39	573181			4316	3	254				HCQAT53	Lambda ZAP II
40	573199	gamma-glutamyl transpeptidase [Homo sapiens] >emb CAA07485.1 (AJ007378) gamma- glutamyltransferase [Homo sapiens] {SUB 193-244} >emb CAA07487.1 (AJ007380) gamma- glutamyltransferase [Homo sapiens] {SUB 296-340} Length = 569	gb AAA35899. 1	4317	2	628	91	91		HETDN09	Uni-ZAP XR
41	573793			4318	283	423				HCYBE04	pBluescript SK-
42	573796	NPAT [Homo sapiens] >dbj BAA11861.1 NPAT [Homo sapiens] >sp Q16580 Q16580 NPAT (E14 AND A-T PROTEINS). Length = 1427	dbj BAA21367 .1	4319	2	892	96	96		HDPFI14	pCMVSPORT 3.0
43	574094	ORF YGR010w [Saccharomyces cerevisiae] >pir S64299 S64299 probable membrane protein YGR010w - yeast (Saccharomyces cerevisiae) >sp P53204 YG15_YEAST HYPOTHETICAL 44.9 KD PROTEIN IN SEC9-MSB2 INTERGENIC REGION. Length = 395	emb CAA9699 3.1	4320	31	423	41	68		HJBCD90	pBluescript SK-
44	574927	methionyl-trna synthetase, mitochondrial [Schizosaccharomyces pombe] >pir T38454 T38454 methionyl-trna synthetase, mitochondrial - fission yeast (Schizosaccharomyces pombe) >sp O14000 O14000 PUTATIVE METHIONYL- TRNA SYNTHETASE (EC 6.1.1.10) (METHIONINE--TR	emb CAB1168 0.1	4321	2	226	48	65		HJAB40	pCMVSPORT 3.0

45	575139					4322	151	429				H2MCA74	pBluescript SK-
46	575591	ATP:citrate lyase [Homo sapiens] >sp Q13037 Q13037 ATP:CITRATE LYASE. Length = 1101	gb AAB60340.1	4323	3	401	80	81				HWBAX42	pCMVSPORT 3.0
47	576132			4324	1	255						HLMMR55	Lambda ZAP II
48	577390			4325	59	322						HNFGN91	Uni-ZAP XR
49	577685			4326	345	557						HTWDI90	pSport1
50	578079			4327	83	256						HCQAB18	Lambda ZAP II
51	578660			4328	3	239						HELHI45	Uni-ZAP XR
52	580860	ribosomal protein L23a [Homo sapiens] >gb AAA35681.1  homology to rat ribosomal protein L23 [Homo sapiens] (SUB 10-156) Length = 156	gb AAA03341.1	4329	528	406	64	80				HNHVDV16	Uni-ZAP XR
53	581143			4330	2	361						HOAAD32	Uni-ZAP XR
54	584899			4331	10	285						HSAVM80	Uni-ZAP XR
55	600669	M130 antigen [Homo sapiens] >emb CAB45233.1  CD163 [Homo sapiens] >pir I38003 S36077 M130 antigen - human >sp Q07898 Q07898 M130 ANTIGEN PRECURSOR. Length = 1116	emb CAA8054.1.1	4332	1	408	85	86				HWLMA51	pSport1
56	611839			4333	55	231						HE8BQ01	Uni-ZAP XR
57	614078			4334	273	428						HELHD03	Uni-ZAP XR
58	614554			4335	215	340						HBMCT70	pBluescript
59	615029			4336	5	157						HL YDF04	pSport1
60	615590			4337	136	321						HDSAP04	Uni-ZAP XR



61	630230	(AF098799) RanBP7/importin 7 [Homo sapiens] >sp O95373 O95373 RANBP7/IMPORNTN 7. >emb CAB70698.1 (AL137335) hypothetical protein [Homo sapiens] {SUB 831-1038} Length = 1038	gb AAC68903. 1	4338	1	423	83	85	HWBFZ21	pCMVSPORT 3.0
62	637548			4339	492	764			HCQBH72	Lambda ZAP II
63	637605			4340	401	604			HELGH31	Uni-ZAP XR
64	638125	(AC004876) similar to neuro-endocrine specific protein VGF; similar to CAA73210 (PID:g2244659) [Homo sapiens] >sp AAD45830 AAD45830 WUGSC:H_DJ0747G18.3 protein. Length = 615	gb AAD45830. 1 AC0048	4341	199	573	68	68	HNHEU34	Uni-ZAP XR
65	638188			4342	105	254			HJMAF30	pCMVSPORT 3.0
66	638249	(AF026198) putative protein 2 [Fugu rubripes] >pir T30536 T30536 hypothetical protein 2 - Fugu rubripes (fragment) >sp O73698 O73698 HYPOTHETICAL 21.5 KD PROTEIN (FRAGMENT). Length = 187	gb AAC15584. 1	4343	3	821	49	63	HWBBK93	pCMVSPORT 3.0
67	638319	(AF118082) PRO1902 [Homo sapiens] >sp AAF22026 AAF22026 PRO1902. Length = 84	gb AAF22026. 1 AF1180	4344	1185	1400	67	73	HFAXAK32	Lambda ZAP II
68	651380			4345	759	1040			HUSIT18	pSport1
69	651876	K-ras oncogene protein [Homo sapiens] Length = 188	gb AAB41942. 1	4346	33	308	78	78	HMWBH51	Uni-ZAP XR
70	653175	(AL050120) hypothetical protein [Homo sapiens] >emb CAB43281.1 (AL050120) hypothetical protein [Homo sapiens] >pir T08766 T08766 hypothetical protein DKFZp586D211.1 - human (fragment) >sp CAB43281 CAB43281 Hypothetical 15.3 kd protein (fragment). Length	emb CAB4328 1.1	4347	1	198	100	100	HCQAW11	Lambda ZAP II
71	655544			4348	1	153			HPRAS01	Uni-ZAP XR

72	656722					4349	331	537				HWBBC13	pCMVSPORT 3.0
73	659801	(AB014509) Nck-associated protein 1 (Nap1) [Homo sapiens] >sp Q9Y2A7 Q9Y2A7 NCK-ASSOCIATED PROTEIN 1 (NAP1). Length = 1128	dbj BAA77295.1	4350	120	1058	94	94				HNTBM67	pCMVSPORT 3.0
74	660020			4351	321	491						HDPKC15	pCMVSPORT 3.0
75	661600			4352	132	341						HMAHP16	Uni-ZAP XR
76	664481	(AC005003) similar to zinc finger protein MAZ [Homo sapiens]; similar to AAB04121.1 (PID:g995935) >sp AAF01349 AAF01349 WUGSC:H_DJ400N23.1 protein. >emb CAB51404.1 (AL096880) hypothetical protein [Homo sapiens] [SUB 26-641] Length = 641	gb AAF01349.1 AC0050	4353	1	279	84	84				HCE1D45	Uni-ZAP XR
77	665154			4354	239	448						HBIBV81	Uni-ZAP XR
78	666790			4355	2	277						HSXBP02	Uni-ZAP XR
79	668040			4356	407	826						HCQCO19	Lambda ZAP II
80	668586			4357	169	342						HHENT19	pCMVSPORT 3.0
81	668717	(AF151895) CGI-137 protein [Homo sapiens] >gb AAF14860.1 AF110777_1 (AF110777) adrenal gland protein AD-004 [Homo sapiens] >sp Q9Y3D8 YCD7_HUMAN HYPOTHETICAL PROTEIN CGI-137. >sp AAF14860 AAF14860 Adrenal gland protein AD-004. Length = 172	gb AAD34132.1 AF1518	4358	2	535	100	100				HMTMB52	PCR II
82	668753			4359	76	171						HOGAL19	pCMVSPORT 2.0
83	671361	(AK000585) unnamed protein product [Homo sapiens] Length = 285	dbj BAA91271.1	4360	110	280	59	69				HCQAG50	Lambda ZAP II

84	674203				4361	280	402			HDPLC22	pCMVSPORT 3.0
85	674745	(AB011098) KIAA0526 protein [Homo sapiens] >emb CAA69942.1  serine palmitoyltransferase, subunit II [Homo sapiens] >gb AAD09621.1  (AF111168) serine palmitoyl transferase, subunit II [Homo sapiens] >sp O15270 LCB2_HUMAN SERINE PALMITOYLTRANSFERASE 2 (EC 2	dbj BAA25452.1	4362	71	1243	94	94		HBMXO90	Uni-ZAP XR
86	674761			4363	194	379				HLMIS22	Lambda ZAP II
87	677212	(AF136450) goodpasture antigen-binding protein [Homo sapiens] >sp Q9Y5P4 Q9Y5P4 GOODPASTURE ANTIGEN-BINDING PROTEIN (EC 2.7.1.37). Length = 624	gb AAD30288.1 AF1364	4364	1	675	98	98		HE8AG73	Uni-ZAP XR
88	683259			4365	63	404				HCBYBF14	pBluescript SK-
89	685895			4366	1	168				HKAAS37	pCMVSPORT 2.0
90	688040	(AL122091) hypothetical protein [Homo sapiens] >emb CAB59261.1 (AL122091) hypothetical protein [Homo sapiens] >pir T34522 T34522 hypothetical protein DKFZp566D244.1 - human (fragment) >sp CAB59261 CAB59261 Hypothetical 64.0 kd protein (fragment). Length	emb CAB59261.1	4367	1	1167	72	81		HBXFP72	ZAP Express
91	688044	(AL110226) hypothetical protein [Homo sapiens] >emb CAB53684.1 (AL110226) hypothetical protein [Homo sapiens] >pir T14764 T14764 hypothetical protein DKFZp434H204.1 - human (fragment) >sp CAB53684 CAB53684 Hypothetical 96.7 kd protein (fragment). Length	emb CAB53684.1	4368	394	978	38	51		HFIYPI5	pSport1

92	688077	(AF047440) ribosomal protein L33-like protein [Homo sapiens] >sp O75394 O75394 RIBOSOMAL PROTEIN L33-LIKE PROTEIN. Length = 65	gb AAC39891.1	4369	1	276	100	100	HEBAG86	Uni-ZAP XR
93	691124			4370	230	418			HLDNM81	pCMVSPORT 3.0
94	691721			4371	139	411			HARNC71	pCMVSPORT 3.0
95	693582			4372	237	428			HE2OC31	Uni-ZAP XR
96	696007	ring finger protein - fruit fly (Drosophila melanogaster) Length = 222	pir JC4296 JC4296	4373	3	767	41	62	HTXKQ20	Uni-ZAP XR
97	697955			4374	34	135			HE2OK20	Uni-ZAP XR
98	698068			4375	3	242			HMWTW31	Uni-ZAP XR
99	702853			4376	113	391			HCEEH33	Uni-ZAP XR
100	703700			4377	1	258			HAGBL85	Uni-ZAP XR
101	705461	(AC007785) BC282485_1 [Homo sapiens] >sp Q9Y6R9 Q9Y6R9 BC282485_1 (FRAGMENT). Length = 477	gb AAD38244.1 AC0077	4378	2	589	96	96	HLWAY38	pCMVSPORT 3.0
102	705692	unnamed protein product [unidentified] Length = 309	emb CAB42187.1	4379	2	211	64	74	H2LAN34	pBluescript SK-
103	706204			4380	914	1267			HBMXT67	Uni-ZAP XR
104	707161			4381	76	144			HE2IE28	Uni-ZAP XR
105	707464	spectrin SH3 domain binding protein 1 [Homo sapiens] >sp O76049 O76049 SPECTRIN SH3 DOMAIN BINDING PROTEIN 1. Length = 508	gb AAC39757.1	4382	185	703	88	89	HBXCG73	ZAP Express
106	709015	PRAJA1 [Mus musculus] >sp O55176 O55176 PRAJA1. Length = 424	gb AAC00205.1	4383	2	412	97	98	HATAN68	Uni-ZAP XR
107	709518			4384	1	159			HAGDD59	Uni-ZAP XR

108	711769				4385	102	323				HBJF165	Uni-ZAP XR
109	711840				4386	182	427				HSNAL84	Uni-ZAP XR
110	711878	!!!! ALU SUBFAMILY SQ WARNING ENTRY !!!! Length = 593	sp P39194 ALU7_HUMAN	4387	1	189	79	85			HCND41	pSport1
111	712638			4388	254	574					HPXAA41	pBluescript
112	713301	!!!! ALU SUBFAMILY SB WARNING ENTRY !!!! Length = 587	sp P39189 ALU2_HUMAN	4389	3	149	75	77			HHSFO42	Uni-ZAP XR
113	714156			4390	600	992					HCEIE94	Uni-ZAP XR
114	714877			4391	10	168					HWLQA43	pSport1
115	715343			4392	29	241					HFXXHM92	Lambda ZAP II
116	716212			4393	299	703					HHSGE44	Uni-ZAP XR
117	717222	(AK000900) unnamed protein product [Homo sapiens] Length = 136	dbj BAA91415.1	4394	1	402	37	37			HWLQJ33	pSport1
118	718259			4395	527	667					HFIAW90	pSport1
119	719829			4396	71	190					HOSEP43	Uni-ZAP XR
120	721985			4397	3	101					HUSGY48	pSport1
121	722249	cerebroside sulfotransferase [Homo sapiens] >dbj BAA89503.1  (AB029901) cerebroside sulfotransferase [Homo sapiens] >gb AAD50517.1 AC005006.2 (AC005006) cerebroside sulfotransferase [Homo sapiens] >sp Q99999 Q99999 CEREBROSIDE SULFOTRANSFERASE. >sp BAA895	dbj BAA13673.1	4398	3	1319	42	61			HSLEC18	Uni-ZAP XR
122	722258	olfactomedin [Rana catesbeiana] >pir A47442 A47442 olfactomedin precursor - bullfrog >sp Q07081 OLFM_RANCA OLFACTOMEDIN PRECURSOR (OLFACTORY MUCUS PROTEIN) Length = 464	gb AAA49527.1	4399	1236	1547	37	55			HUFAC36	pSport1

123	723136	put. ring protein [Homo sapiens] >sp Q99579 Q99579 PUTATIVE RING PROTEIN. Length = 236	emb CAA6916 5.1	4400	571	143	83	87	HHFHB49	Uni-ZAP XR
124	725110			4401	174	323			HFIBH05	pSport1
125	725201	(AB020676) KIAA0869 protein [Homo sapiens] >sp O94946 O94946 KIAA0869 PROTEIN (FRAGMENT). Length = 888	dbj BAA74892 .1	4402	1	294	98	100	HKIAA57	Uni-ZAP XR
126	726122			4403	309	530			HRKAB52	pBluescript
127	727365			4404	1	915			HPCAN95	Uni-ZAP XR
128	729143			4405	609	821			HCQCV54	Lambda ZAP II
129	729231			4406	345	602			HLJEA54	pCMVSPORT I
130	731881	!!!! ALU SUBFAMILY J WARNING ENTRY !!!! Length = 591	sp P39188 AL UI_HUMAN	4407	361	462	56	65	HTWCR70	pSport1
131	732280	(AB002349) KIAA0351 [Homo sapiens] >sp O15059 O15059 KIAA0351. Length = 557	dbj BAA20808 .1	4408	155	598	81	82	HSXDD55	Uni-ZAP XR
132	732932			4409	295	483			HSTAB63	Uni-ZAP XR
133	733034	expressed-Xq28STS protein [Homo sapiens] Length = 358	gb AAAF33529. 1 U82695	4410	305	553	86	89	H6BSI11	Uni-ZAP XR
134	734012			4411	64	180			HDQPP57	pCMVSPORT 3.0
135	735603			4412	991	1224			HAGEX59	Uni-ZAP XR
136	739061			4413	436	621			HAVMG19	Other
137	741134	protein [Homo sapiens] >sp Q14288 Q14288 HYPOTHETICAL PROTEIN (FRAGMENT). Length = 641	gb AAA88038. 1	4414	676	314	61	69	HLEAL50	Uni-ZAP XR
138	741257	protein [Homo sapiens] >sp Q14287 Q14287 HYPOTHETICAL PROTEIN (FRAGMENT). Length = 157	gb AAA88036. 1	4415	136	195	41	52	HCPAC07	Uni-ZAP XR
139	741804			4416	196	441			HOSEQ61	Uni-ZAP XR

140	742220	initiation factor 5A [Gallus gallus] >pir J50227 A42156 translation initiation factor eIF-5A I - chicken >sp Q07460 IF51_CHICK INITIATION FACTOR 5A-1 (EIF-5A) (EIF-4D). Length = 153	gb AAA17444.1	4417	3	455	83	88	HCROB09	pSport1
141	744605			4418	255	479			HF1ZP62	pSport1
142	744687			4419	231	374			HBMTK19	Uni-ZAP XR
143	745368			4420	1	114			HAGDG84	Uni-ZAP XR
144	747870			4421	343	519			HCABQ86	Uni-ZAP XR
145	750486			4422	694	897			HSAXE65	Uni-ZAP XR
146	751119	Impact [Mus musculus] >sp O55091 O55091 IMPACT PROTEIN. Length = 318	dbj BAA35139.1	4423	2	481	68	77	HE8OC67	Uni-ZAP XR
147	752557			4424	1	210			HKAHA68	pCMVSPORT 2.0
148	753226	PROTEIN (FRAGMENT). Length = 184	sp Q29229 Q29229	4425	25	810	38	51	HSFAG23	Uni-ZAP XR
149	754269			4426	737	949			HDTAT69	pCMVSPORT 2.0
150	756466	(AF099731) connexin 31.1 [Homo sapiens] >sp O95377 CXB5_HUMAN GAP JUNCTION BETA-5 PROTEIN (CONNEXIN 31.1) (CX31.1). Length = 273	gb AAC95472.1	4427	3	293	96	96	HAICM70	Uni-ZAP XR
151	756538	homologous to mouse Rsu-1; putative [Homo sapiens] >pir 60122 60122 rsu-1 homolog - human >sp Q15404 RSU1_HUMAN RAS SUPPRESSOR PROTEIN 1 (RSU-1) (RSP-1 PROTEIN) (RSP-1). Length = 277	gb AAA60292.1	4428	93	1151	100	100	HMCGF70	Uni-ZAP XR
152	756649	The ha2022 gene product is novel. [Homo sapiens] >sp Q14699 Y084_HUMAN HYPOTHETICAL PROTEIN KIAA0084 (HA2022) (FRAGMENT). Length = 648	dbj BAA07644.1	4429	1	135	100	100	HE8EX74	Uni-ZAP XR

153	757213	(AK001459) unnamed protein product [Homo sapiens] Length = 245	dbj BAA91704.1	4430	3	362	84	85	HACBN11	Uni-ZAP XR
154	757508	PIBF1 protein [Homo sapiens] >sp O95664 O95664 PIBF1 PROTEIN. Length = 758	emb CAA7084.4.1	4431	3	734	87	89	HTTBS70	Uni-ZAP XR
155	757532			4432	98	385			HCRNF04	pSport1
156	757980			4433	365	622			HETIS94	Uni-ZAP XR
157	760141	(AK000743) unnamed protein product [Homo sapiens] Length = 573	dbj BAA91356.1	4434	2	763	79	79	HDPXJ71	pCMVSPORT 3.0
158	761491			4435	153	377			HRABS72	pCMVSPORT 3.0
159	761724			4436	43	183			HYAAX74	pCMVSPORT 3.0
160	762027			4437	2	661			HSKXC19	pBluescript
161	764179			4438	112	243			HF6SG75	pBluescript
162	766961			4439	332	472			HCYBG95	pBluescript SK-
163	767593			4440	327	497			HCECT76	Uni-ZAP XR
164	768034			4441	632	919			HEIBB38	Uni-ZAP XR
165	769965	M-phase phosphoprotein 9 [Homo sapiens] >sp Q99550 MPP9_HUMAN M-PHASE PHOSPHOPROTEIN 9 (FRAGMENT). Length = 214	emb CAA6691.1.1	4442	1	465	98	99	HHEMK76	pCMVSPORT 3.0
166	771486			4443	374	664			HE9PB77	Uni-ZAP XR
167	772044	DNA polymerase epsilon catalytic subunit [Homo sapiens] >pir G02434 G02434 DNA-directed DNA polymerase (EC 2.7.7.7) epsilon catalytic chain - human Length = 2285	gb AAA90924.1	4444	129	611	100	100	HTLDW36	Uni-ZAP XR



168	772357	ect2 [Mus musculus] >pir[S32372 S32372 transforming protein (ect2) - mouse >sp Q07139 ECT2_MOUSE ECT2 PROTEIN (ECT2 ONCOGENE). Length = 738	gb AAA37536.1	4445	403	738	86	93	HMWHN43	Uni-ZAP XR
169	772876	(AK000771) unnamed protein product [Homo sapiens] Length = 202	dbj BAA91373.1	4446	59	820	99	99	HUSIR49	pSport1
170	774019	(AF061739) [Homo sapiens] >sp O95792 O95792 HYPOTHETICAL 20.1 KD PROTEIN. Length = 186	gb AAD17528.1	4447	14	520	75	75	HE9HY44	Uni-ZAP XR
171	774244	(AL009196) /prediction=(method:"genefinder", version:"084"); /prediction=(method:"gensecan", version:"1.0"); /match=(desc:"LD09991.5prime LD Drosophila melanogaster embryo BlueScript Drosophila melanogaster cDNA clone LD09991 5prime, mRNA seque>	emb CAA1571.2.1	4448	2	1123	71	86	HTTEL19	Uni-ZAP XR
172	774516	(AK000482) unnamed protein product [Homo sapiens] Length = 572	dbj BAA91194.1	4449	1	438	54	74	HMCFS02	Uni-ZAP XR
173	775355			4450	1599	1781			HDTBY31	pCMVSPORT 2.0
174	775367			4451	142	228			HUSXP15	pSport1
175	775791			4452	588	911			HSAWS31	Uni-ZAP XR
176	777319			4453	283	477			HE8OV83	Uni-ZAP XR
177	778434	stress-activated protein kinase-3 [Homo sapiens] >emb CAB51538.1 (AL022328) d 402G11.1 (mitogen activated protein kinase 12 (PRKM11)) [Homo sapiens] >sp P53778 MK12_HUMAN MITOGEN-ACTIVATED PROTEIN KINASE 12 (EC 2.7.1.-) (EXTRACELLULAR SIGNAL-REGULATED KI	emb CAA7151.1	4454	2	880	96	96	HL3AD81	Uni-ZAP XR

178	778583	(AF000198) weak similarity to HSP90 [Caenorhabditis elegans] >pir T15138 T15138 hypothetical protein T28F2.4 - Caenorhabditis elegans >sp O01658 O01658 SIMILARITY TO HSP90. Length = 817	gb AAB53055. 1	4455	3	248	29	52	HHERQ03	pCMVSPORT 3.0
179	779480			4456	331	546			HTXF140	Uni-ZAP XR
180	779588			4457	49	162			HBIMB82	pCMVSPORT 3.0
181	781085			4458	2300	2641			HTTEW79	Uni-ZAP XR
182	781286			4459	149	289			HLJB183	pCMVSPORT 1
183	781366			4460	261	605			HSAWU83	Uni-ZAP XR
184	781376			4461	23	340			HADF62	pSPORT1
185	781832			4462	587	733			HSNAK79	Uni-ZAP XR
186	782276	(AB032969) KIAA1143 protein [Homo sapiens] >sp BAA86457 BAA86457 KIAA1143 protein (fragment). Length = 116	dbj BAA86457 .1	4463	2	472	71	71	HSUBX87	Uni-ZAP XR
187	782358			4464	1008	1289			HATEF13	Uni-ZAP XR
188	783413	D9 splice variant 1 [Mus musculus] >sp O08693 O08693 D9 SPLICE VARIANT 1. Length = 111	gb AAB53635. 1	4465	1	591	80	88	HEBFR23	Uni-ZAP XR
189	783668			4466	171	464			HARMP12	pCMVSPORT 3.0
190	783677			4467	240	380			HJMBT13	pCMVSPORT 3.0
191	785087	beta-galactosidase alpha peptide [Cloning vector pSport2] Length = 114	gb AAA67217. 1	4468	606	815	95	95	HEAAK74	Uni-ZAP XR
192	785328	unnamed protein product [unidentified] >emb CAB42218.1  unnamed protein product [unidentified] {SUB 62-446} Length = 446	emb CAB4221 2.1	4469	388	609	91	95	HAMG186	pCMVSPORT 3.0

193	785465				4470	2	535			HDPCN86	pCMVSPORT 3.0
194	788626	(AB028639) PalBH [Homo sapiens] >sp Q9Y6W3 Q9Y6W3 PALBH (EC 3.4.22.17). Length = 813	dbj BAA78730 .1		4471	399	79	98	98	HMCGR90	Uni-ZAP XR
195	788838	(AL132980) putative protein [Arabidopsis thaliana] >sp CAB62631 CAB62631 Hypothetical 29.5 kd protein. Length = 263	emb CAB6263 1.1		4472	2	388	30	52	HHBFM33	pCMVSPORT 1
196	789286				4473	108	209			HSLF109	Uni-ZAP XR
197	789419				4474	141	410			HFIAX76	pSPORT1
198	789631				4475	192	320			HLICN93	pCMVSPORT 1
199	789872				4476	3	314			HCFBE51	pSPORT1
200	790190	EYA1A [Homo sapiens] >emb CAA71309.1  EYA1A [Homo sapiens] Length = 559	emb CAA7130 9.1		4477	2249	1989	90	94	HFEAU63	Uni-ZAP XR
201	790347	PAP-1 [Mus musculus] >sp P97762 P97762 PAP-1. Length = 213	dbj BAA11319 .1		4478	2	313	96	98	HAFBC92	pBluescript SK-
202	791155				4479	168	545			HE9SD26	Uni-ZAP XR
203	791220				4480	1893	2102			HFIZG43	pSPORT1
204	791749				4481	161	283			HDPUX67	pCMVSPORT 3.0
205	792034				4482	64	222			HVAAA93	pSPORT1
206	792557	(AB004066) DEC1 [Homo sapiens] >pir JC5547 JC5547 basic helix-loop-helix factor DEC1 - human >sp O14503 O14503 DEC1. Length = 412	dbj BAA21720 .1		4483	231	470	92	93	HAMFQ15	pCMVSPORT 3.0
207	792624	PACT [Mus musculus] >sp P70287 P70287 RETINOBLASTOMA BINDING PROTEIN 6 (PACT) (FRAGMENT). Length = 1587	gb AAB49620. 1		4484	1	465	68	78	HADCW71	pSPORT1

208	793437	actVA 4 [Streptomyces coelicolor A3(2)] >pir S18542 S18542 hypothetical protein 4 - Streptomyces coelicolor >sp Q53906 Q53906 6 ACTVA REGION GENES OF THE ACTINORHODIN BIOSYNTHETIC GENE CLUSTER. Length = 294	emb CAA4164 0.1	4485	215	3	47	57	HCHMB04	pSport1
209	795184			4486	162	323			HLQAX49	Lambda ZAP II
210	795744	cytochrome c oxidase subunit II [Pan troglodytes] >sp P26457 COX2_PANPA CYTOCHROME C OXIDASE POLYPEPTIDE II (EC 1.9.3.1). Length = 227	gb AAA20069. 1	4487	3	101	96	100	HMAJP26	Uni-ZAP XR
211	796023			4488	842	1399			HBJEA52	Uni-ZAP XR
212	796181	!!!! ALU SUBFAMILY SP WARNING ENTRY !!!! Length = 593		4489	268	669			HPSNE17	pSport1
213	797079	!!!! ALU SUBFAMILY SB WARNING ENTRY !!!! Length = 587	sp P39193 AL U6_HUMAN	4490	1	174	75	79	HTECB93	Uni-ZAP XR
214	797477		sp P39189 AL U2_HUMAN	4491	1376	1450	85	90	HCYBF25	pBluescript SK-
215	797486	(AB006781) galectin-4 [Homo sapiens] >gb AAB86590.1  galectin-4 [Homo sapiens] >gb AAC51763.1  (AF014838) galectin-4 [Homo sapiens] >sp P56470 LEG4_HUMAN GALECTIN-4 (LACTOSE-BINDING LECTIN 4) (L-36 LACTOSE BINDING PROTEIN) (L36LBP). >sp AAB86590 AAB86590	dbj BAA22165 .1	4492	603	1655	93	93	HGAMA30	pSport1
216	797747			4493	3	251			HRACH60	pCMV Sport 3.0
217	800085	oncostatin M [Homo sapiens] >gb AAC05173.1  (AC004264) oncostatin M precursor [Homo sapiens] >pir A32489 A32489 oncostatin M precursor - human >sp P13725 ONCM_HUMAN ONCOSTATIN M PRECURSOR (OSM). Length = 252	gb AAA36388. 1	4494	1	273	73	75	HNFI254	pBluescript
218	801919	(AK000496) unnamed protein product [Homo sapiens] Length = 239	dbj BAA91205 .1	4495	2792	2899	55	64	HMSCL38	Uni-ZAP XR

219	805448					4496	51	200				HDQGA42	pCMV Sport 3.0
220	806690					4497	125	349				HFIIY89	pSport1
221	810870	thrombospondin-4 [Homo sapiens] >pir A55710 TSHUP4 thrombospondin 4 precursor - human >sp P35443 TSP4_HUMAN THROMBOSPONDIN 4 PRECURSOR. Length = 961	emb CAA7963.5.1	4498	2	1333	90	90				HBOEB83	pSport1
222	811047	VCP-like ATPase [Thermoplasma acidophilum] >pir T37458 T37458 VCP-like ATPase - Thermoplasma acidophilum >sp O05209 O05209 VCP-LIKE ATPASE. Length = 745	gb AAC45089.1	4499	184	1257	47	70				HMEBY61	Lambda ZAP II
223	812745	(AB000549) alpha,-antitrypsin-like protein [Tamias sibiricus] >sp O54760 ALSI_TAMSI ALPHA-1-ANTITRYPSIN-LIKE PROTEIN CM55-SI PRECURSOR. Length = 413	dbj BAA24419.1	4500	2	1339	43	63				HETDK50	Uni-ZAP XR
224	812755	(AF007791) secreted cement gland protein XAG-2 homolog [Homo sapiens] >gb AAC82614.1  (AF038451) secreted cement gland protein XAG-2 homolog [Homo sapiens] >gb AAF22484.1 AF088867_1 (AF088867) putative secreted protein XAG [Homo sapiens] >pir JE0350 JE035	gb AAC77358.1	4501	2	541	60	78				HSIEH63	Uni-ZAP XR
225	812871			4502	1	87						HLTDL01	Uni-ZAP XR
226	813482	(AK000432) unnamed protein product [Homo sapiens] Length = 379	dbj BAA91162.1	4503	151	864	100	100				HKAJJ29	pCMV Sport 2.0
227	815696	(AF104419) decoy receptor 3 [Homo sapiens] >gb AAD29688.1 AF134240_1 (AF134240) tumor necrosis factor receptor homolog [Homo sapiens] >gb AAF33685.1 AF217793_1 (AF217793) M68C [Homo sapiens] >gb AAF33686.1 AF217794_1 (AF217794) M68E [Homo sapiens] >gb AAF	gb AAD03056.1	4504	1	1023	86	86				HTPCH84	Uni-ZAP XR

228	821335	protein [Homo sapiens] >sp Q14287 Q14287 HYPOTHETICAL PROTEIN (FRAGMENT). Length = 157	gb AAA88036. 1	4505	1057	1323	57	76	HWDAC26	pCMVSPORT 3.0
229	824071			4506	1370	1594			HMUBJ22	pCMVSPORT 3.0
230	827298	reverse transcriptase [Homo sapiens] Length = 361	gb AAB02291. 1	4507	1279	1202	44	58	HMSDI67	Uni-ZAP XR
231	827315	GS3786 [Homo sapiens] >gb AAD54511.1 AC006364_1 (AC006364) GS3786 [Homo sapiens] >sp Q92520 G786_HUMAN PROTEIN GS3786. >sp AAD54511 AAD54511 GS3786. Length = 227	dbj BAA13251 .1	4508	764	964	63	81	HWLEZ80	pSport1
232	827562	(AJ271442) Tspan-2 protein [Rattus norvegicus] >sp CAB69827 CAB69827 Tspan-2 protein. Length = 221	emb CAB6982 7.1	4509	2	688	85	88	HAIDQ59	Uni-ZAP XR
233	827721			4510	190	411			HTJN176	pCMVSPORT 2.0
234	827740			4511	716	838			HBNAP17	Uni-ZAP XR
235	828180	(AF067797) aquaporin 8 [Homo sapiens] >sp AAF19050 AAF19050 Aquaporin 8. Length = 261	gb AAF19050. 1	4512	20	883	83	83	HWLFM26	pSport1
236	828552	ORF_ID:o255#5; similar to [SwissProt Accession Number P45576] [Escherichia coli] >gb AAC74362.1  (AE000226) putative heat shock protein [Escherichia coli] >pir C64876 C64876 yciM protein precursor - Escherichia coli >sp P45576 YCIM_ECOLI HYPOTHETICAL 44.5	dbj BAA14834 .1	4513	390	7	95	98	HPWBE34	Uni-ZAP XR
237	828670			4514	222	350			HPICC36	Uni-ZAP XR
238	828919	RNA helicase [Homo sapiens] >pir S71758 S71758 DEAD box protein MrDb, Myc-regulated - human >sp Q92732 Q92732 RNA HELICASE. Length = 610	emb CAA6729 5.1	4515	2	661	99	100	HFOYL30	pSport1

239	829084					4516	1043	1288				HLXNE31	pSport1
240	829148					4517	55	279				HLHDP51	Uni-ZAP XR
241	829161	(AF019767) zinc finger protein [Homo sapiens] >sp O75312 ZP1_HUMAN ZINC-FINGER PROTEIN ZP1. Length = 459	gb AAC33514.1	4518	3	116	100	100				HCRMY95	pSport1
242	830123	strong similarity to class-III of pyridoxal-phosphate- dependent aminotransferases [Caenorhabditis elegans] >pir T25848 T25848 hypothetical protein T01B11.2 - Caenorhabditis elegans >sp P91408 YO1J CAEL PROBABLE AMINOTRANSFERASE T01B11.2 (EC 2.6.1.-). Leng	gb AAB37999.1	4519	2	430	49	70				HAQBZ89	Uni-ZAP XR
243	830151			4520	111	341						HYAAS90	pCMVSPORT 3.0
244	830194	(AL136543) hypothetical protein [Homo sapiens] >emb CAB66478.1  (AL136543) hypothetical protein [Homo sapiens] >sp CAB66478 CAB66478 Hypothetical 84.8 kd protein. >pir B34461 B34461 heat shock protein 90 beta - rabbit (fragment) {SUB 1-25} >sp P30947 HS9B	emb CAB66478.1	4521	3	1043	92	92				HLDCP20	pCMVSPORT 3.0
245	830231			4522	1	243						HWLJS42	pSport1
246	830316			4523	793	960						HWLEH32	pSport1
247	830343	non-muscle myosin heavy chain [Bos taurus] >sp O02717 O02717 NON-MUSCLE MYOSIN HEAVY CHAIN (FRAGMENT). Length = 625	gb AAC19403.1	4524	272	850	46	64				HWLGI62	pSport1
248	830347	(AF127035) calcium-activated chloride channel protein 2 [Homo sapiens] >sp AAD48398 AAD48398 Calcium-activated chloride channel protein 2. >dbj BAA90969.1  (AK000138) unnamed protein product [Homo sapiens] {SUB 449-917} Length = 917	gb AAD48398.1  AF1270	4525	3	656	97	97				HWLEL81	pSport1

249	830382				4526	2	229			HWHPA71	pCMVSPORT 3.0
250	830436	(AB020663) KIAA0856 protein [Homo sapiens] >sp O94938 O94938 KIAA0856 PROTEIN (FRAGMENT). Length = 1070	dbj BAA74879.1		4527	83	523	97	98	HWABR83	pCMVSPORT 3.0
251	830465	preA-PAI-2 [synthetic construct] >emb CAA00247.1  miniactivin [synthetic construct] {SUB 20-434} >gb AA60005.1  plasminogen activator inhibitor 2, (first expressed exon) [Homo sapiens] {SUB 20-75} Length = 434	emb CAA0150.3.1		4528	51	1319	94	94	HUVDZ54	Uni-ZAP XR
252	830498				4529	420	677			HUFAR83	pSport1
253	830540	protein kinase MUK2 [Rattus norvegicus] >gb AAB95646.1  serine/threonine protein kinase [Rattus norvegicus] >sp P35465 PAK1_RAT SERINE/THREONINE-PROTEIN KINASE PAK-ALPHA (EC 2.7.1.-) (P68-PAK) (P21-ACTIVATED KINASE) (PAK-1) (ALPHA-PAK) (PROTEIN KINASE MU	gb AAB61533.1		4530	2	733	100	100	HTLHR67	Uni-ZAP XR
254	830568	tyrosine protein kinase [Homo sapiens] >sp Q08345 EDD1_HUMAN EPITHELIAL DISCOIDIN DOMAIN RECEPTOR 1 PRECURSOR (EC 2.7.1.12) (TYROSINE-PROTEIN KINASE CAK) (CELL ADHESION KINASE) (TYROSINE KINASE DDR) (DISCOIDIN RECEPTOR TYROSINE KINASE) (TRK E) (PROTEIN-T	gb AAA18019.1		4531	3	1874	84	84	HTSGO78	pBluescript
255	830582	(AL050179) hypothetical protein [Homo sapiens] >emb CAB43309.1  (AL050179) hypothetical protein [Homo sapiens] >pir T08796 T08796 tropomyosin - human (fragment) >sp Q9Y427 Q9Y427 HYPOTHETICAL 34.9 KD PROTEIN (FRAGMENT). >emb CAA24257.1  fragment from trop	emb CAB4330.9.1		4532	107	712	84	87	HSLHS76	Uni-ZAP XR
256	830586	(2'-5')oligoadenylate synthetase [Homo sapiens] Length = 364	dbj BAA00047.1		4533	2	1192	94	94	HKACP86	pCMVSPORT 2.0



257	830685	(AB032945) KIAA1119 protein [Homo sapiens] >sp BAA86433 BAA86433 KIAA1119 protein (fragment). Length = 1260	dbj BAA86433 .1	4534	321	1106	92	92	HASARS2	Uni-ZAP XR
258	830693	(AF077301) Bcl-2-interacting protein beclin [Homo sapiens] >sp O75595 O75595 BCL-2- INTERACTING PROTEIN BECLIN. Length = 450	gb AAC68653. .1	4535	152	1504	90	90	HAHSF60	pBluescript
259	830710			4536	1	105			HCQCD01	Lambda ZAP II
260	830723	(AB015594) Pex11p [Homo sapiens] >gb AAC78658.1 (AF093668) peroxisomal biogenesis factor [Homo sapiens] >sp O75192 O75192 PEX11P. Length = 247	dbj BAA32533 .1	4537	10	612	83	83	HUSZD77	pSport1
261	830743	(AF077045) ATP synthase epsilon chain [Homo sapiens] >sp AAD27778 AAD27778 ATP synthase epsilon chain. >sp P56381 ATPE_HUMAN ATP SYNTHASE EPSILON CHAIN, MITOCHONDRIAL (EC 3.6.1.34). {SUB 2-51} Length = 51	gb AAD27778. 1 AF0770	4538	53	262	100	100	HCBBA51	Uni-ZAP XR
262	830804	(AB006746) hMmTRA1b [Homo sapiens] >gb AAC99413.1 (AF098642) phospholipid scramblase; plasma membrane phospholipid scramblase [Homo sapiens] >pir JE0284 JE0284 Mm-1 cell derived transplantability-associated 1b - Human >sp O15162 O15162 PHOSPHOLIPID SCRAM	dbj BAA32568 .1	4539	68	283	100	100	HSDE184	Uni-ZAP XR
263	830816	(AL137349) hypothetical protein [Homo sapiens] >emb CAB70704.1 (AL137349) hypothetical protein [Homo sapiens] >sp CAB70704 CAB70704 Hypothetical 60.3 kd protein (fragment). Length = 541	emb CAB7070 4.1	4540	3	1130	94	95	HFIYB72	pSport1
264	830829	(AF151847) CGI-89 protein [Homo sapiens] >sp Q9Y397 Q9Y397 CGI-89 PROTEIN. Length = 382	gb AAD34084. 1 AF1518	4541	2	370	71	85	HMTAE63	pCMV Sport 3.0

265	830859	(AF097362) gamma-interferon inducible lysosomal thiol reductase [Homo sapiens] >sp AAF04618 AAF04618 Gamma-interferon inducible lysosomal thiol reductase. >gb AAD22672.1 AC007192_3 (AC007192) INIP_HUMAN [AA 4- 104] [Homo sapiens] {SUB 4-104} Length = 261	gb AAF04618.1 AF0973	4542	1	735	80	82	HWBE114	pCMVSPORT 3.0
266	830879	(AF003924) ANC_2H01 [Homo sapiens] >sp AAF21240 AAF21240 ANC_2H01. Length = 485	gb AAF21240.1 AF0039	4543	2	592	100	100	HVAAB82	pSport1
267	830901	GLY1 protein [Escherichia coli] >dbj BAA20882.1  (AB005050) threonine aldolase [Escherichia coli] >gb AAC73957.1  (AE000188) putative arylsulfatase [Escherichia coli] >pir F64825 F64825 L-allo-threonine aldolase (EC 4.1.2.-) - Escherichia coli >sp P75823	dbj BAA35584.1	4544	190	1005	94	96	HPWBX45	Uni-ZAP XR
268	831019	ORF 3 [Homo sapiens] >pir E41925 E41925 hypothetical protein 3 - human >sp Q14270 Q14270 ORF 3. Length = 143	gb AAA58464.1	4545	297	235	53	66	HODGW05	Uni-ZAP XR
269	831057	coded for by C. elegans cDNAs GenBank: CE5D1 (Z14791), CEL01F1 (M88817), CEL04B5 (M88849), and CEL04C1 (M75812); putative [Caenorhabditis elegans] >pir S44853 S44853 K12H4.3 protein - Caenorhabditis elegans >sp P34524 YM63_CAEEL HYPOTHETICAL 40.2 KD PROTEIN	gb AAA28097.1	4546	3	1106	45	68	HNTCW73	pCMVSPORT 3.0
270	831099	integrin beta 1 subunit precursor [Homo sapiens] >pir B27079 B27079 fibronectin receptor beta chain precursor - human >sp P05556 ITB1_HUMAN FIBRONECTIN RECEPTOR BETA SUBUNIT PRECURSOR (INTEGRIN BETA-1) (CD29) (INTEGRIN VLA-4 BETA SUBUNIT). >gb AAA79835.1	emb CAA3079.0	4547	3	1697	94	94	HA5AB03	pSport1

271	831117					4548	400	579			HMWBR70	Uni-ZAP XR
272	831163	!!!! ALU SUBFAMILY SQ WARNING ENTRY !!!! Length = 593	sp P39194 ALU7_HUMAN			4549	3	161	75	83	HMSHS44	Uni-ZAP XR
273	831210	TGF-beta masking protein large subunit [Rattus norvegicus] >pir A38261 A38261 masking protein precursor - rat >sp Q00918 TGFB_RAT LATENT TRANSFORMING GROWTH FACTOR BETA BINDING PROTEIN 1 PRECURSOR (TRANSFORMING GROWTH FACTOR BETA-1 BINDING PROTEIN 1) (TGF	gb AAA42235.1			4550	1	498	86	91	HMEIJ62	Lambda ZAP II
274	831212	(AF051882) carbonic anhydrase XII precursor [Homo sapiens] >gb AA C63952.1  (AF037335) carbonic anhydrase precursor [Homo sapiens] >sp O43570 CAHC_HUMAN CARBONIC ANHYDRASE XII PRECURSOR (EC 4.2.1.1) (CARBONATE DEHYDRATASE XII) (CA-XII) (TUMOR ANTIGEN HOM-R	gb AAC39789.1			4551	206	385	100	100	HWHHW79	pCMVSPORT 3.0
275	831234					4552	202	498			HL YGG06	pSPORT
276	831239					4553	420	638			HMEKY46	Lambda ZAP II
277	831268					4554	324	749			HLTER57	Uni-ZAP XR
278	831307	(AK001317) unnamed protein product [Homo sapiens] Length = 481	dbj BAA91619.1			4555	33	935	94	94	HAPOA59	Uni-ZAP XR
279	831313	reading frame v-fos (p55) [Mus musculus] >pir A01344 TVMVJ transforming protein fos - FBJ murine osteosarcoma virus >sp P01102 FOS_MSVFB P55-V-FOS TRANSFORMING PROTEIN. Length = 381	emb CAA2450.5.1			4556	1182	1670	73	85	HAGDZ30	Uni-ZAP XR
280	831386					4557	1097	1363			HKLRB18	pBluescript

281	831390	aldehyde reductase (EC 1.1.1.2) [Homo sapiens] >gb AAB92369.1 (AF036683) aldehyde reductase [Homo sapiens] >gb AAF01260.1 AF112485_1 (AF112485) aldehyde reductase [Homo sapiens] >pir A33851 A33851 alcohol dehydrogenase (NADP+) (EC 1.1.1.2) - human >sp AA	gb AAA51711.1	4558	254	1312	94	94	HKGDF04	pSport1
282	831426	(AJ245539) GalNAc-T5 [Homo sapiens] >sp CAB65104 CAB65104 GalNAc-T5 (fragment). Length = 668	emb CAB65104.1	4559	3	827	93	94	HKAJZ24	pCMVSPORT 2.0
283	831453	2A9 peptide [Homo sapiens] >gb AAA51905.1  calcyclin [Homo sapiens] >gb AAA51906.1  put. calcyclin; putative [Homo sapiens] >pir A28363 BCHUY calcyclin - human >sp P06703 S106_HUMAN CALCYCLIN (PROLACTIN RECEPTOR ASSOCIATED PROTEIN) (PRA) (GROWTH FACTOR-IN	gb AAA35886.1	4560	1	315	83	83	HWLJE49	pSport1
284	831465	(AB014600) KJAA0700 protein [Homo sapiens] >sp O75182 O75182 KJAA0700 PROTEIN (FRAGMENT). Length = 1130	dbj BAA31675.1	4561	2	529	90	93	HJPAU37	Uni-ZAP XR
285	831558			4562	3	410			HHGCU20	Lambda ZAP II
286	831586	(AF179867) STE20-like kinase [Homo sapiens] >sp AAF14559 AAF14559 STE20-like kinase. Length = 898	gb AAF14559.1 AF1798	4563	2	850	94	94	HHEDO80	pCMVSPORT 3.0
287	831664	heterogeneous nuclear ribonucleoprotein complex K, hnRNP K [human, Peptide, 463 aa] [Homo sapiens] >dbj BAA04566.1  dC-stretch binding protein (CSBP) [Rattus norvegicus] >pir A42058 A42058 heterogeneous nuclear ribonucleoprotein complex K, hnRNP K - human	gb AAB20770.1	4564	180	1574	72	72	HFPCU40	Uni-ZAP XR

288	831687	hMpv17 [Homo sapiens] >gb AAD14014.1 1683146_1 [Homo sapiens] >pir S45343 S45343 glomerulosclerosis protein Mpv17 - human >sp P39210 MPV1_HUMAN MPV17 PROTEIN. >gb AAC24205.1 (AF038633) Mpv17 protein [Homo sapiens] {SUB 155-176} Length = 176	emb CAA5404 7.1	4565	60	305	98	100	HFKHD75	Uni-ZAP XR
289	831703			4566	52	240			HFIHX78	pSport1
290	831753			4567	1	219			HETIK68	Uni-ZAP XR
291	831757			4568	915	1208			HETBE76	Uni-ZAP XR
292	831795			4569	1490	1855			HTXOJ32	Uni-ZAP XR
293	831796			4570	892	1158			HE9RY54	Uni-ZAP XR
294	831880			4571	1	444			HE6FT69	Uni-ZAP XR
295	831899			4572	1	693			HDTBQ51	pCMVSPORT 2.0
296	831910			4573	3	308			HDTAB33	pCMVSPORT 2.0
297	831931			4574	201	464			HLHGG05	Uni-ZAP XR
298	831942	(AJ388553) hypothetical protein [Canis familiaris] >sp Q9XSR5 Q9XSR5 HYPOTHETICAL 15.3 KD PROTEIN (FRAGMENT). Length = 146	emb CAB4685 2.1	4575	44	763	72	77	HDPTH11	pCMVSPORT 3.0
299	831956			4576	3	269			HDPLB15	pCMVSPORT 3.0
300	832009			4577	2	346			HDAAQ89	pSport1

301	832010	(AL021918) b3418.1 (Kruppel related Zinc Finger protein 184) [Homo sapiens] >sp O60792 O60792.B3418.1 (KRUPPEL RELATED ZINC FINGER PROTEIN 184). Length = 751	emb CAA1727 8.1	4578	1	348	57	69	HDFUB44	pCMVSPORT 2.0
302	832044	5-aminoimidazole-4-carboxamide ribonucleotide transferase [Homo sapiens] >dbj BAA11559.1  5-aminoimidazole-4-carboxamide-1-beta-D-ribose nucleotide transferase [Homo sapiens] >pir JC4642 JC4642 purH bifunctional enzyme - human >sp Q13856 Q	dbj BAA21762 .1	4579	1	1794	99	99	HGCOL40	pSport1
303	832093			4580	279	422			HCRNJ73	pSport1
304	832138			4581	317	466			HODEY51	Uni-ZAP XR
305	832148			4582	246	380			HFIHN81	pSport1
306	832187			4583	26	400			HCQAI40	Lambda ZAP II
307	832343	Similarity to E.coli 2-oxoglutarate dehydrogenase (SW:ODO1_ECOLI); cDNA EST EMBL:D32590 comes from this gene; cDNA EST EMBL:D32841 comes from this gene; cDNA EST EMBL:D34051 comes from this gene; cDNA EST EMBL:D35268 comes from this gene; cDNA > >pir T2803	emb CAB0159 0.1	4584	462	1487	60	77	HWACZ95	pCMVSPORT 3.0
308	832346			4585	295	471			HBAGU45	pSport1
309	832411			4586	196	489			HRGSB33	pBluescript
310	832464			4587	145	360			HAIJC35	pCMVSPORT 3.0
311	832575	protein tyrosine kinase [Homo sapiens] >pir A55922 A55922 tyrosine kinase A6 - human >sp Q12792 Q12792 PROTEIN TYROSINE KINASE. Length = 350	gb AAC50062. 1	4588	49	1203	99	99	H2LAJ21	pBluescript SK-

312	832593	CENP-F kinetochore protein [Homo sapiens] >sp P49454 CENF_HUMAN CENP-F KINETOCHORE PROTEIN. Length = 3210	gb AAA82889.1	4589	2	811	91	92	H2LAB53	pBluescript SK-
313	832597			4590	214	318			H2CBJ07	pBluescript SK-
314	834890	TRANSCRIPTION FACTOR BTF3 (RNA POLYMERASE B TRANSCRIPTION FACTOR 3). Length = 204	sp Q64152 BT F3_MOUSE	4591	70	588	87	88	H2CBT12	pBluescript SK-
315	835079			4592	151	348			HOELH62	Uni-ZAP XR
316	835456	(AL035608) dJ479J7.1 (similar to CHONDROMODULIN-1) [Homo sapiens] >sp CAB55680 CAB5680 DJ479J7.1 (similar to CHONDROMODULIN-1) (fragment). Length = 263	emb CAB55680.1	4593	85	1041	79	79	HE8NG02	Uni-ZAP XR
317	835655			4594	1075	1332			HAGFG91	Uni-ZAP XR
318	836203			4595	550	990			HWLOG76	pSport1
319	836261	(AF117615) heme-binding protein [Homo sapiens] >sp Q9Y5Z5 Q9Y5Z5 HEME-BINDING PROTEIN. Length = 189	gb AAD32098.1 AF1176	4596	116	292	98	98	HBMA50	pBluescript SK-
320	836762	(AF132552) BcDNA.GM01838 [Drosophila melanogaster] >sp Q9XZ53 Q9XZ53 BCDNA.GM01838. Length = 774	gb AAD27851.1 AF1325	4597	2	1075	75	84	H2CBN10	pBluescript SK-
321	836988	(AB011176) KIAA0604 protein [Homo sapiens] >sp O60344 ECE2_HUMAN ENDOTHELIN-CONVERTING ENZYME 2 (EC 3.4.24.71) (ECE-2) (KIAA0604). Length = 765	dbj BAA25530.1	4598	89	571	87	87	HCE3164	Uni-ZAP XR
322	838140			4599	300	476			HE2CH58	Uni-ZAP XR
323	838459	!!!! ALU SUBFAMILY J WARNING ENTRY !!!! Length = 591	sp P39188 ALU1_HUMAN	4600	1223	1354	68	76	HTHCW70	Uni-ZAP XR

324	839262	(AF000364) heterogeneous nuclear ribonucleoprotein R [Homo sapiens] >pir T02673 T02673 heterogeneous nuclear ribonucleoprotein R - human >sp O43390 O43390 HETEROGENEOUS NUCLEAR RIBONUCLEOPROTEIN R. Length = 633	gb AAC39540.1	4601	26	1216	99	99	HAPOF13	Uni-ZAP XR
325	839384	(AL133623) hypothetical protein [Homo sapiens] >emb CAB63749.1  (AL133623) hypothetical protein [Homo sapiens] >sp CAB63749 CAB63749 Hypothetical 130.1 kd protein (fragment). Length = 1159	emb CAB63749.1	4602	5	1069	92	93	HTGEX11	Uni-ZAP XR
326	839750	(AF100757) COP9 complex subunit 4 [Homo sapiens] >sp Q9Y677 Q9Y677 COP9 COMPLEX SUBUNIT 4. Length = 405	gb AAD43021.1	4603	1	1155	100	100	HWHGE39	pCMVSPORT 3.0
327	840028			4604	60	419			HNGIN84	Uni-ZAP XR
328	840572	putative [Homo sapiens] >pir 54339 54339 prot-oncogene bmi-1 - human >sp P35226 BIM1_HUMAN DNA-BINDING PROTEIN BMI-1. Length = 326	gb AAA19873.1	4605	3	1172	95	95	HTGAZ34	Uni-ZAP XR
329	840675	(AL117430) hypothetical protein [Homo sapiens] >emb CAB55919.1  (AL117430) hypothetical protein [Homo sapiens] >pir T17229 T17229 hypothetical protein DKFZp434D156.1 - human >sp CAB55919 CAB55919 Hypothetical 39.8 kd protein. Length = 384	emb CAB55919.1	4606	2	592	66	66	HNTEF54	pCMVSPORT 3.0
330	840708			4607	1200	1487			HTEAF73	Uni-ZAP XR
331	840847	(AL035461) dJ967N21.6 (novel CDP-alcohol phosphatidyltransferase family member protein) [Homo sapiens] >sp CAB55278 CAB55278 dJ967N21.6 (novel CDP-alcohol phosphatidyltransferase family member protein). Length = 301	emb CAB55278.1	4608	151	1044	93	93	HPJCI42	Uni-ZAP XR



332	840848	prohibitin [human, Peptide, 272 aa] [Homo sapiens] >pir I52690 I52690 prohibitin - human >sp P35232 PHB_HUMAN PROHIBITIN. Length = 272	gb AAB21614.1	4609	81	917	93	93	HHBM75	pCMVSPORT 1
333	840860	NAP [Homo sapiens] >pir S40510 S40510 nucleosome assembly protein 1-like 1 - human >sp P55209 NPL1_HUMAN NUCLEOSOME ASSEMBLY PROTEIN 1-LIKE 1 (NAP-1 RELATED PROTEIN). Length = 391	gb AAC37544.1	4610	92	1309	68	68	HDTL39	pCMVSPORT 2.0
334	841015			4611	48	425			HE2DT31	Uni-ZAP XR
335	841017			4612	402	683			HE2AY01	Uni-ZAP XR
336	841030			4613	515	721			HWLOA34	pSPORT
337	841241	Thy-1 [Homo sapiens] >pir A02106 TDHU Thy-1 membrane glycoprotein precursor - human >sp P04216 THY1_HUMAN THY-1 MEMBRANE GLYCOPROTEIN PRECURSOR (THY-1 ANTIGEN) (CDW90) (CD90 ANTIGEN). Length = 161	gb AAA61180.1	4614	128	622	86	87	HBXFG67	ZAP Express
338	841957			4615	355	609			HWLOF51	pSPORT
339	846025	(A1010973) DEDD protein [Homo sapiens] >gb AAC33105.1 (AF083236) FLDED-1 [Homo sapiens] >gb AAC80280.1 (AF043733) death effector domain-containing testicular molecule [Homo sapiens] >gb AAD16414.1 (AF100341) death effector domain-containing protein DED	emb CAA09445.1	4616	1	1098	63	83	HLDOK36	pCMVSPORT 3.0
340	846362	(AC006950) IgG Fc binding protein [AA 4671-5405] [Homo sapiens] >sp O95784 O95784 IGG FC BINDING PROTEIN (FRAGMENT). Length = 735	gb AAD15624.1	4617	449	1894	93	93	HSDJF12	Uni-ZAP XR
341	846384	(AF127036) calcium-activated chloride channel protein 1 [Homo sapiens] >sp AAD25487 AAD25487 Calcium-activated chloride channel protein 1. Length = 914	gb AAD25487.1 AF1270	4618	1125	2780	96	96	HWLFF02	pSPORT

342	846750	(AF132148) [Drosophila melanogaster] >sp Q9XYZ6 Q9XYZ6 HYPOTHETICAL 75.5 KD PROTEIN. Length = 653	gb AAD34736.1	4619	1	1503	47	61	HEMF121	Uni-ZAP XR
343	847289			4620	322	510			HWLUW66	pSport1
344	847598	!!!! ALU SUBFAMILY SQ WARNING ENTRY !!!! Length = 593	sp P39194 ALU7_HUMAN	4621	710	859	85	87	HNTEG90	pCMVSPORT 3.0
345	848119	(AF145634) BcDNA GH06193 [Drosophila melanogaster] >sp Q9Y138 Q9Y138 BCDNA.GH06193. Length = 696	gb AAD38609.1 AF1456	4622	1	243	66	88	HELG49	Uni-ZAP XR
346	848746			4623	250	666			HWLQO44	pSport1
347	849084	ATP synthase subunit e [Homo sapiens] >sp P56385 ATP1_HUMAN ATP SYNTHASE E CHAIN, MITOCHONDRIAL (EC 3.6.1.34). {SUB 2-69} Length = 69	dbj BAA23322.1	4624	1	270	78	78	HFEBT64	Uni-ZAP XR
348	849114	epidermal growth factor receptor kinase substrate [Homo sapiens] >pir 38728 38728 epidermal growth factor receptor kinase substrate - human >sp Q12929 EPS8_HUMAN EPIDERMAL GROWTH FACTOR RECEPTOR KINASE SUBSTRATE EPS8. Length = 822	gb AAA62280.1	4625	3	986	100	100	HUVFL24	Uni-ZAP XR
349	849143	zinc finger protein PZF [Mus musculus] >pir 48724 48724 zinc finger protein PZF - mouse >sp Q62511 Q62511 ZINC FINGER PROTEIN PZF. Length = 455	gb AAA81913.1	4626	62	1795	88	89	HAMGR89	pCMVSPORT 3.0
350	849155	carbonic anhydrase I (EC 4.2.1.1) [Homo sapiens] >emb CAA28663.1  carbonic anhydrase I (AA 1-261) [Homo sapiens] >pir Q0786 CRHU1 carbonate dehydratase (EC 4.2.1.1) I - human >sp P00915 CAH1_HUMAN CARBONIC ANHYDRASE I (EC 4.2.1.1) (CARBONATE DEHYDRATASE	gb AA51910.1	4627	71	859	100	100	HKLSA58	pBluescript

351	849159	carcinoembryonic antigen [Homo sapiens] >gb AA66186.1  carcinoembryonic antigen [Homo sapiens] >gb AAC62825.1  (AC005797) carcinoembryonic antigen CGM2 precursor - human [Homo sapiens] >pir A55811 A55811 carcinoembryonic antigen CGM2 precursor - human >s	emb CAA6695 5.1	4628	1	903	99	99	HWLCG11	pSport1
352	849244	(AK001553) unnamed protein product [Homo sapiens] >dbj BAA91996.1  (AK001951) unnamed protein product [Homo sapiens] Length = 227	dbj BAA91753 .1	4629	110	877	100	100	HMSJT69	Uni-ZAP XR
353	849254			4630	18	323			HRABQ68	pCMVSPORT 3.0
354	849301	ornithine decarboxylase [Homo sapiens] >gb AA59969.1  ornithine decarboxylase [Homo sapiens] >gb AA60563.1  ornithine decarboxylase [Homo sapiens] >gb AA60564.1  ornithine decarboxylase [Homo sapiens] >emb CAA39047.1  ornithine decarboxylase [Homo sapiens] ornithine decarboxylase [Homo sapiens]	gb AA59967. 1	4631	164	1561	100	100	H2CBM53	pBluescript SK-
355	849317	(AK000500) unnamed protein product [Homo sapiens] Length = 158	dbj BAA91207 .1	4632	1	534	89	89	HPRTG34	pBluescript
356	849332	homology to a plant EST:RJC2753A [Homo sapiens] >sp O95571 O95571 mRNA EXPRESSED IN THYROID GLAND. Length = 227	dbj BAA34595 .1	4633	13	831	99	99	HE8DO31	Uni-ZAP XR
357	849422	(AL035071) dJ1085F17.2 (EB1 (APC binding protein)) [Homo sapiens] >gb AAC09471.1  EB1 [Homo sapiens] >pir J52726 J52726 EB1 - human >sp Q15691 Q15691 EB1. >sp CAB53072 CAB53072 DJ1085F17.2 (EB1 (APC binding protein)). Length = 268	emb CAB5307 2.1	4634	1	933	100	100	HAIDB85	Uni-ZAP XR
358	849471	thromboxane synthase [Homo sapiens] Length = 533	dbj BAA07011 .1	4635	688	1788	95	95	HMCIR67	Uni-ZAP XR

359	849492	ubiquitin conjugating-protein [Oryctolagus cuniculus] >gb AAA35982.1  HHR6B (Human homologue of yeast RAD 6); putative [Homo sapiens] >emb CAA37339.1  E2 protein [Homo sapiens] >gb AA21087.1  ubiquitin conjugating-protein [Rattus norvegicus] >emb CAA6560	gb AAA31492.1	4636	2	595	100	100	HKAJC79	pCMVSPORT 2.0
360	849534	beta-galactosidase alpha peptide [Cloning vector pSport2] Length = 114	gb AAA67217.1	4637	302	508	100	100	HCRMP14	pSport1
361	849565			4638	806	1036			HPRAO21	Uni-ZAP XR
362	849583	(AF120206) XY body protein [Mus musculus] >gb AAF18303.1 AF120207_1 (AF120207) XY body protein [Mus musculus] >sp AAF18302 AAF18302 XY body protein. >sp AAF18303 AAF18303 XY body protein. Length = 840	gb AAF18302.1 AF1202	4639	1	1851	68	76	HAIBU93	Uni-ZAP XR
363	849589	(AB009282) cytochrome b5 [Homo sapiens] >sp O43169 O43169 CYTOCHROME B5 (FRAGMENT). Length = 146	dbj BAA23735.1	4640	44	508	99	100	HCFMH52	pSport1
364	849658	(AF020762) protein [Homo sapiens] >sp O43466 O43466 HYPOTHETICAL 31.3 KD PROTEIN (FRAGMENT). Length = 267	gb AAB97675.1	4641	831	968	47	53	HMVAE41	pSport1
365	849666	macrophage capping protein [Homo sapiens] >pir A43358 A43358 macrophage capping protein - human >sp P40121 CAPG_HUMAN MACROPHAGE CAPPING PROTEIN (ACTIN-REGULATORY PROTEIN CAP-G). >gb AAA92670.1  Cap-G [Homo sapiens] {SUB 1-172} Length = 348	gb AAA59570.1	4642	57	1100	98	99	HMSDT39	Uni-ZAP XR
366	849679	(AJ003061) most expressed alternative spliced form [Homo sapiens] >sp O60852 O60852 PROTEIN ENCODED BY SACCHAROMYCES CEREVISIAE SPC98 HOMOLOGUE. Length = 907	emb CAA05832.1	4643	3	1169	95	95	HE8NK24	Uni-ZAP XR

367	849741					4644	948	1067			HWHQP08	pCMVSPORT 3.0
368	849783	lumican [Homo sapiens] Length = 338	gb AAA91639.1			4645	69	1127	95	95	HCRP123	pSport1
369	850211					4646	52	213			HTOAC26	Uni-ZAP XR
370	850254	!!!! ALU SUBFAMILY SQ WARNING ENTRY !!!! Length = 593	sp P39194 ALU7_HUMAN			4647	1031	1144	80	87	HUVCQ41	Uni-ZAP XR
371	850264	N-Acetyl-beta-D-glucosaminide [Homo sapiens] >emb CAA76985.1  glycoprotein 6-alpha-L-fucosyltransferase [Homo sapiens] >emb CAA76986.1  glycoprotein 6-alpha-L-fucosyltransferase [Homo sapiens] >emb CAA76987.1  glycoprotein 6-alpha-L-fucosyltransferase [Ho	dbj BAA19764.1			4648	601	2145	97	97	HPJEC66	Uni-ZAP XR
372	850273					4649	336	476			HCQCD86	Lambda ZAP II
373	850371					4650	69	182			HCRMX05	pSport1
374	850859	(AF124522) tetraspan NET-2 [Homo sapiens] >sp O95859 O95859 TETRASPAN NET-2. Length = 305	gb AAD17317.1			4651	1	513	99	100	HAPRB43	Uni-ZAP XR
375	851066	(AK000302) unnamed protein product [Homo sapiens] Length = 436	dbj BAA91068.1			4652	434	1033	98	98	HWHQL22	pCMVSPORT 3.0
376	851217					4653	1	273			HWLMN93	pSport1
377	852170	!!!! ALU SUBFAMILY SQ WARNING ENTRY !!!! Length = 593	sp P39194 ALU7_HUMAN			4654	1550	1681	73	74	HTGFW53	Uni-ZAP XR
378	852387					4655	269	496			HANGG89	pSport1
379	852812	GDP dissociation inhibitor beta [Homo sapiens] >emb CAA73735.1  GDP dissociation inhibitor beta [Homo sapiens] >sp O43928 O43928 GDP DISSOCIATION INHIBITOR BETA. >gb AAD34588.1  (AF144713) Rab GDP dissociation inhibitor beta [Homo sapiens] {SUB 81-439} Le	emb CAA73734.1			4656	1	852	100	100	HKAAV86	pCMVSPORT 2.0

380	853175	!!!! ALU SUBFAMILY SQ WARNING ENTRY !!!! Length = 593	sp P39194 AL U7_HUMAN	4657	234	608	82	84	HSACF33	pBluescript SK-
381	853230			4658	19	273			H2CBA56	pBluescript SK-
382	854063			4659	1	129			HLJBL63	pCMVSPORT 1
383	854073	(AF068754) heat shock factor binding protein 1 HSBP1 [Homo sapiens] >sp O75506 O75506 HEAT SHOCK FACTOR BINDING PROTEIN 1 HSBP1. Length = 76	gb AAC25186. 11	4660	146	403	100	100	HHFOV83	Uni-ZAP XR
384	854987	no arches [Homo sapiens] >sp O95639 O95639 NO ARCHES. Length = 269	gb AAD00321. 11	4661	76	408	100	100	HMTAE04	pCMVSPORT 3.0
385	855130			4662	127	333			HWLNN76	pSPORT1
386	856227	arrestin [Homo sapiens] >pir S18984 S18984 arrestin - human (fragment) >sp P32121 ARR2_HUMAN BETA-ARRESTIN 2. Length = 409	emb CAA7757 7.11	4663	1	636	59	62	HDQFE56	pCMVSPORT 3.0
387	856243	similar to citrate lyase beta chain; cDNA EST yk302b4.5 comes from this gene [Caenorhabditis elegans] >pir T18818 T18818 hypothetical protein C01G10.7 - Caenorhabditis elegans >sp Q93167 Q93167 C01G10.7 PROTEIN. Length = 324	emb CAB0270 9.11	4664	1	411	35	54	HLDBR21	pCMVSPORT 3.0
388	856354	KIAA0176 [Homo sapiens] >sp Q14681 Y176_HUMAN HYPOTHETICAL PROTEIN KIAA0176 (FRAGMENT). Length = 265	dbj BAA11493 11	4665	1	591	40	56	HHAUD91	pCMVSPORT 3.0
389	856923	(AF132951) CGI-17 protein [Homo sapiens] >sp Q9Y306 Q9Y306 CGI-17 PROTEIN. Length = 385	gb AAD27726. 11 AF1329	4666	3	881	98	98	HTOHA37	Uni-ZAP XR
390	857684			4667	166	2			HDPPP71	pCMVSPORT 3.0

391	857946	(AF077034) HSPC010 [Homo sapiens] >gb AAD33954.1 AF145385_1 (AF145385) hypoxia-inducible gene 1 [Homo sapiens] >sp Q9Y241 Q9Y241 HIG1 PROTEIN (HSPC010). Length = 93	gb AAD27767.1 AF0770	4668	1	408	100	100	HBBE52	pCMVSPORT 1
392	858166			4669	641	1006			HLTDR01	Uni-ZAP XR
393	858178	KIAA0183 [Homo sapiens] >sp Q14688 Q14688 KIAA0183 PROTEIN (FRAGMENT). Length = 1062	dbj BAA11500.1	4670	1837	3153	87	87	HMECD50	Lambda ZAP II
394	858606			4671	2	307			HDPJL40	pCMVSPORT 3.0
395	858894	KIAA0021 protein [Homo sapiens] >sp BAA03499 BAA03499 KIAA0021 protein (fragment). Length = 703	dbj BAA03499.2	4672	2	1894	89	89	HDPGS38	pCMVSPORT 3.0
396	858949			4673	29	322			HCQAM69	Lambda ZAP II
397	858958			4674	2	106			HOSNC15	Uni-ZAP XR
398	859171	Similar to Human C219-reactive peptide (L34688) [Homo sapiens] >sp Q92580 Q92580 MYELOBLAST KIA0268 (FRAGMENT). >gb AAB00324.1  C219-reactive peptide [Homo sapiens] {SUB 592-727} Length = 1193	dbj BAA13448.1	4675	3	1463	84	84	HHEJQ41	pCMVSPORT 3.0
399	859352	(AF107406) GW128 [Homo sapiens] >sp Q9Y649 Q9Y649 GW128. Length = 63	gb AAD44524.1 AF1074	4676	177	398	100	100	HTXMR51	Uni-ZAP XR
400	859354	(AK001214) unnamed protein product [Homo sapiens] Length = 532	dbj BAA91559.1	4677	3	1244	99	99	HHFCX08	Uni-ZAP XR
401	859702			4678	56	310			HNTEG54	pCMVSPORT 3.0

402	860915	(AF010312) Pig7 [Homo sapiens] >gb AAB36550.1  LPS-Induced TNF-Alpha Factor [Homo sapiens] >sp Q99732 LITF_HUMAN LIPOPOLYSACCHARIDE-INDUCED TUMOR NECROSIS FACTOR-ALPHA FACTOR (LPS- INDUCED TNF-ALPHA FACTOR) (P53 INDUCED PROTEIN 7). Length = 228	gb AAC39530.1	4679	321	656	100	100	HNFFZ19	Uni-ZAP XR
403	861209	collagen type XII alpha-1 [Homo sapiens] >sp Q99715 CA1C_HUMAN COLLAGEN ALPHA 1(XII) CHAIN PRECURSOR. >pir A44036 A44036 collagen alpha 1(XII) chain - bovine (fragment) {SUB 2492-2517} Length = 3063	gb AAC51244.1	4680	91	1773	91	92	HCDEA29	Uni-ZAP XR
404	861534			4681	115	2			HCYBJ35	pBluescript SK-
405	861697	Na,K-ATPase beta subunit [Homo sapiens] >emb CAA27385.1  put. Na/K-ATPase beta (aa 1- 303) [Homo sapiens] >pir A23764 PWHUNB Na+/K+-exchanging ATPase (EC 3.6.1.37) beta chain - human >sp P05026 ATNB_HUMAN SODIUM/POTASSIUM-TRANSPORTING ATPASE BETA-1 CHAIN (	gb AAA36352.1	4682	103	1029	96	96	HEBGA63	Uni-ZAP XR
406	861826			4683	311	841			HFACI10	Uni-ZAP XR
407	861909	(AJ242015) eMDC II protein [Homo sapiens] >sp Q9Y3S0 Q9Y3S0 EMDC II PROTEIN. Length = 775	emb CAB4208.5.1	4684	2	1318	96	96	HETCM67	Uni-ZAP XR
408	862197			4685	15	194			HCRNF78	pSport1
409	862232			4686	1	144			HRACX96	pCMVSPORT 3.0
410	862237	(AF151810) CGI-52 protein [Homo sapiens] >sp Q9Y365 Q9Y365 CGI-52 PROTEIN. Length = 359	gb AAD34047.1 AF1518	4687	654	1706	90	90	HTLAK94	Uni-ZAP XR
411	862277			4688	256	417			HCQCV31	Lambda ZAP II



412	862285				4689	533	727			HTJMG70	pCMVSPORT 2.0
413	862423				4690	93	185			HSNAT52	Uni-ZAP XR
414	862456				4691	500	880			HHFCZ67	Uni-ZAP XR
415	862486	(AB002533) Qip1 [Homo sapiens] >gb AAC25605.1  importin alpha 3 [Homo sapiens] >pir JCS505 JCS505 DNA helicase Q1 interacting protein 1 - human >sp O00629 IMA4_HUMAN IMPORTIN ALPHA-4 SUBUNIT (KARYOPHERIN ALPHA-4 SUBUNIT) (QIP1 PROTEIN). Length = 521	dbj BAA19546 .1		4692	192	1178	88	89	HHFIA95	Uni-ZAP XR
416	862709				4693	323	493			HMSOR85	Uni-ZAP XR
417	863865				4694	1	207			HBJJU68	Uni-ZAP XR
418	863944	similar to Glutathione S-transferases.; cDNA EST yk536e7.3 comes from this gene [Caenorhabditis elegans] >pir T24175 T24175 hypothetical protein R11A8.5 - Caenorhabditis elegans >sp Q21925 Q21925 R11A8.5 PROTEIN. Length = 347	emb CAA9436 8.1		4695	3	1385	46	67	HDPBN09	pCMVSPORT 3.0
419	864428				4696	151	972			HFNAC49	pSPORT
420	864808				4697	209	574			HHETS46	pCMVSPORT 3.0
421	864822				4698	256	447			HHATS67	pCMVSPORT 3.0
422	865044				4699	171	485			HLHTL45	pBluescript
423	865420				4700	1	696			HHETZ45	pCMVSPORT 3.0
424	865421	(AK001431) unnamed protein product [Homo sapiens] Length = 597	dbj BAA91687 .1		4701	253	2247	97	97	HNAAF81	pSPORT
425	866287				4702	359	613			HSLGX52	Uni-ZAP XR



434	868135	BST-2 [Homo sapiens] >pir A56836 A56836 bone marrow stromal cell surface protein BST-2 - human >sp Q10589 BST2_HUMAN BONE MARROW STROMAL ANTIGEN 2 (BST-2). Length = 180	dbj BAA05679.1	4711	78	656	85	85	HFKMJ43	Uni-ZAP XR
435	868173			4712	963	1169			HMSFS13	Uni-ZAP XR
436	868224			4713	1	615			HCRQH59	pSport1
437	868655	(AK001655) unnamed protein product [Homo sapiens] Length = 372	dbj BAA91815.1	4714	2	1225	99	99	HHFJU87	Uni-ZAP XR
438	869698	nuclear protein SA-2 [Homo sapiens] >sp O00540 O00540 NUCLEAR PROTEIN SA-2. Length = 1162	emb CAA9973.2.1	4715	600	1541	93	93	HFIAU59	pSport1
439	870190	Ca2+ ATPase of fast-twitch skeletal muscle sarcolemmal reticulum, adult isoform [Homo sapiens] >sp O14983 O14983 CA2+ ATPASE OF FAST-TWITCH SKELETAL MUSCLE SARCOPLASMIC RETICULUM, ADULT ISOFORM. Length = 1001	gb AAB53113.1	4716	592	1452	88	89	HBKDR59	pSport1
440	870349	!!!! ALU SUBFAMILY J WARNING ENTRY !!!! Length = 591	sp P39188 ALU1_HUMAN	4717	396	536	68	79	HTHCZ54	Uni-ZAP XR
441	870419	ezrin (AA 1-586) [Homo sapiens] >pir A34400 A34400 ezrin - human >sp P15311 EZRI_HUMAN EZRIN (P81) (CYTOVILLIN) (VILLIN-2). {SUB 2-586} >gb AA61278.1  cytovillin 2 [Homo sapiens] {SUB 12-586} Length = 586	emb CAA3589.3.1	4718	79	1386	86	86	HWABV82	pCMVSPORT 3.0
442	870522	(AF044286) histone macroH2A1.1 [Homo sapiens] >sp O75377 O75377 HISTONE MACROH2A1.1. Length = 369	gb AAC33434.1	4719	142	660	100	100	HACAC44	Uni-ZAP XR
443	870896			4720	378	629			HDTLE81	pCMVSPORT 2.0
444	871071			4721	12	158			HSWBU77	pCMVSPORT 3.0

445	871225	(AF029684) IkB kinase-beta [Homo sapiens] >gb AAD08997.1 (AF080158) IkB kinase-b [Homo sapiens] >sp O14920 O14920 IKB KINASE-BETA (FRAGMENT). Length = 756	gb AAC51860.1	4722	2	802	94	94	HWACJ61	pCMVSPORT 3.0
446	871428			4723	2662	2964			HKLSC04	pBluescript
447	871498	(AK001443) unnamed protein product [Homo sapiens] Length = 420	dbj BAA91694.1	4724	490	2	99	99	HCRPM84	pSport1
448	871732			4725	447	719			HLHGG41	Uni-ZAP XR
449	871756			4726	291	506			HWLNH36	pSport1
450	871821	(AL157432) hypothetical protein [Homo sapiens] Length = 221	emb CAB7565.6.1	4727	89	841	88	88	HKAAC09	pCMVSPORT 2.0
451	872327	transmembrane protein [Mus musculus] >pir A31351 A31351 probable transmembrane protein FT27 - mouse >sp P52875 PF27_MOUSE TRANSMEMBRANE PROTEIN PFT27. Length = 323	gb AAA40456.1	4728	818	952	67	77	HLHAR50	Uni-ZAP XR
452	872354	RNA splicing-related protein [Rattus norvegicus] >sp O54729 O54729 BRAIN. Length = 712	dbj BAA23885.1	4729	2	403	98	100	HSKJB43	pBluescript
453	872535	serine protease [Homo sapiens] >sp O15393 TMS2_HUMAN TRANSMEMBRANE PROTEASE, SERINE 2 (EC 3.4.21.-). Length = 492	gb AAC51784.1	4730	530	1108	42	57	HNSMB24	pSport1
454	872551	predicted using GeneFinder; similar to Propionyl-CoA carboxylase beta chain; cDNA EST EMBL:M89018 comes from this gene; cDNA EST EMBL:D28069 comes from this gene; cDNA EST EMBL:D28068 comes from this gene; cDNA EST EMBL:D33966 comes from this > >pir S2831	emb CAA7961.8.1	4731	530	1807	64	80	HAIJAN23	pCMVSPORT 3.0
455	872640	(AB011118) KIAA0546 protein [Homo sapiens] >pir T00325 T00325 hypothetical protein KIAA0546 - human (fragment) >sp O60293 O60293 KIAA0546 PROTEIN (FRAGMENT). Length = 632	dbj BAA25472.1	4732	2	1954	100	100	HWBAP55	pCMVSPORT 3.0

456	872655				4733	2	361			HE2JO26	Uni-ZAP XR
457	872802	(AK001631) unnamed protein product [Homo sapiens] Length = 390	dbj BAA91797.1		4734	192	923	94	95	HEGAK44	Uni-ZAP XR
458	872852				4735	1830	2150			HOGCK09	pCMVSPORT 2.0
459	873299				4736	272	505			HE9FH03	Uni-ZAP XR
460	873633	(AJ132860) receptor for activated C kinase [Bos taurus] >emb CAA83944.1  G-beta like protein [Sus scrofa] >gb AAD37978.1  (AF146043) RACK1 [Sus scrofa] >gb AAA59626.1  MHC B complex protein 12.3 [Homo sapiens] >emb CAA53062.1  B complex protein mRNA 12-3	emb CAB6479.2.1		4737	1	513	100	100	HWLUI05	pSport1
461	874164	(AC005313) protein [Arabidopsis thaliana] >pir T02714 T02714 hypothetical protein T18E12.21 - Arabidopsis thaliana >sp O81062 O81062 T18E12.21 PROTEIN. Length = 344	gb AAC34490.1		4738	88	564	54	71	HCEVS38	Uni-ZAP XR
462	874307				4739	175	384			HE2BS79	Uni-ZAP XR
463	874308				4740	12	293			HHMMB54	pSport1
464	874309				4741	306	689			HKABZ52	pCMVSPORT 2.0
465	874310	hypothetical L1 protein (third intron of gene TS) - human Length = 562	pir JU0033 JU0033		4742	258	37	74	86	HCROJ11	pSport1
466	874320	(AF164119) CRIB-containing BORG3 protein [Mus musculus] >sp AAD48816 AAD48816 CRIB-containing BORG3 protein. Length = 150	gb AAD48816.1 AF1641		4743	321	767	95	97	HWLJP34	pSport1
467	874325	(AB002342) KIAA0344 [Homo sapiens] >sp O15052 O15052 KIAA0344. Length = 1246	dbj BAA20802.1		4744	3	503	59	81	HSYDL64	pCMVSPORT 3.0

468	874327	(AC005005) similar to phosphatidylinositol (4,5)bisphosphate 5-phosphatase; match to PID:g1399105 [Homo sapiens] >sp AAD15618 AAD15618 WUGSC:H_DJ412A9.2 protein (fragment). Length = 1056	gb AAD15618.1	4745	2	838	70	71	HCE1G78	Uni-ZAP XR
469	874328	AMSH [Homo sapiens] >sp O95630 O95630 AMSH. Length = 424	gb AAD05037.1	4746	173	496	63	82	H50BR31	Uni-ZAP XR
470	874329			4747	501	752			HLLCC54	pCMVSPORT 1
471	874330			4748	491	685			HE2LO76	Uni-ZAP XR
472	874345			4749	350	430			HT1IU53	Uni-ZAP XR
473	874348			4750	3	356			HUFDS37	pSport1
474	874349	(AC004030) F21856_2 [Homo sapiens] >pir T00636 T00636 hypothetical protein F21856_2 - 1  human >sp O43360 O43360 F21856_2. Length = 679	gb AAB97620.1	4751	2	517	87	87	HWMAJ78	pSport1
475	874350			4752	72	428			HWADK27	pCMVSPORT 3.0
476	874352	(AE002030) thermoresistant gluconokinase [Deinococcus radiodurans] >pir B75338 B75338 thermoresistant gluconokinase - Deinococcus radiodurans (strain R1) >sp AAF11464 AAF11464 Thermoresistant gluconokinase. Length = 172	gb AAF11464.1 AE0020	4753	1	579	52	67	HCRNT71	pSport1
477	874358	(AB033025) KIAA1199 protein [Homo sapiens] >sp BAA86513 BAA86513 KIAA1199 protein (fragment). Length = 1013	dbj BAA86513.1	4754	3	584	96	96	HCRQA24	pSport1

478	874362	methionine aminopeptidase [Homo sapiens] >gb AAC63402.1  eIF-2-associated p67 homolog [Homo sapiens] >pir S52112 DPHUM2 methionyl aminopeptidase (EC 3.4.11.18) 2 - human >sp P50579 AMP2_HUMAN METHIONINE AMINOPEPTIDASE 2 (EC 3.4.11.18) (METAP 2) (PEPTIDASE)	gb AAA82930. 1	4755	2	1501	86	86	HUVC45	Uni-ZAP XR
479	874368			4756	3	230			HRAAG89	pCMVSPORT 3.0
480	874369	Cell division protein FtsK. [Escherichia coli] >dbj BAA35622.1  Cell division protein FtsK. [Escherichia coli] >gb AAC73976.1  (AE000191) cell division protein [Escherichia coli] >pir A64828 A64828 cell division protein ftsK - Escherichia coli >sp P46889	dbj BAA35615 .1	4757	1787	1449	84	85	HSLJR04	Uni-ZAP XR
481	874370	(AF195765) L2DTL protein [Homo sapiens] Length = 730	gb AAF35182. 1 AF1957	4758	3	335	74	80	HNTBD52	pCMVSPORT 3.0
482	874372	suppressor of hairless protein 1 [Xenopus laevis] >sp Q91880 Q91880 SUPPRESSOR OF HAIRLESS PROTEIN 1. Length = 501	gb AAB05478. 1	4759	2	472	82	88	HNTST27	pSport1
483	874396			4760	31	210			HSKJH49	pBluescript
484	874399			4761	105	1484			HOEMK72	Uni-ZAP XR
485	874400			4762	190	405			HBKDS37	pSport1
486	874401			4763	97	501			HJMAK37	pCMVSPORT 3.0
487	874403			4764	619	936			HUSGS50	pSport1
488	874407	(AJ004856) connexin31 [Homo sapiens] >gb AAC95471.1  (AF099730) connexin 31 [Homo sapiens] >gb AAD11816.1  (AF052692) connexin 31; gap junctional protein cx31 [Homo sapiens] >pir E0274 E0274 connexin 31 - human >sp O75712 CXB3_HUMAN GAP JUNCTION BETA-3	emb CAA00616 5.1	4765	3	863	77	77	HTOJL45	Uni-ZAP XR

489	874410				4766	175	444			HLTGR10	Uni-ZAP XR
490	874411				4767	168	530			HWLQF84	pSport1
491	874413				4768	248	427			HCQBD69	Lambda ZAP II
492	874414				4769	312	545			HATBE07	Uni-ZAP XR
493	874416	IDN4-GGTR14 PROTEIN. >dbj BAA77334.1  (AB019493) IDN4-GGTR9 [Homo sapiens] {SUB 57-414} >emb CAA22908.1  (AL035303) hypothetical protein [Homo sapiens] {SUB 159-414} Length = 414	sp Q9Y6Y5 Q9Y6Y5	4770	3	110	88	97	HCQDD86	Lambda ZAP II	
494	874417			4771	89	349			HUCNE27	pSport1	
495	874422			4772	168	347			HCRNL83	pSport1	
496	874423			4773	17	202			HCRNJ94	pSport1	
497	874424			4774	216	476			HCROK63	pSport1	
498	874426			4775	788	997			HCQDC45	Lambda ZAP II	
499	874427	(AF118637) feline leukemia virus subgroup C receptor FLVCR [Homo sapiens] >sp Q9Y5Y0 Q9Y5Y0 C-RECEPTOR. >dbj BAA91679.1  (AK001419) unnamed protein product [Homo sapiens] {SUB 277-555} Length = 555	gb AAD45243.1 AF1186	4776	2	385	96	96	HCYBG26	pBluescript SK-	
500	874428			4777	204	497			HCRNV56	pSport1	
501	874432			4778	532	828			HCYBL48	pBluescript SK-	
502	874433			4779	16	258			HTODN93	Uni-ZAP XR	



503	874435	(AL110261) hypothetical protein [Homo sapiens] >emb CAB53702.1 (AL110261) hypothetical protein [Homo sapiens] >pir T14782 T14782 hypothetical protein DKFZp586B0621.1 - human (fragment) >sp CAB53702 CAB53702 Hypothetical 22.8 kd protein (fragment). Length	emb CAB53702.1	4780	316	600	98	98	HWLQK42	pSport1
504	874436			4781	45	197			HODDJ01	Uni-ZAP XR
505	874437	anthracycline-associated resistance ARX [Homo sapiens] >gb AAD24434.1 AF110957.1 (AF110957) SUMO-1 activating enzyme subunit 2 [Homo sapiens] >sp O95605 O95605 ANTHRACYCLINE-ASSOCIATED RESISTANCE ARX. Length = 640	gb AAC99992.1	4782	3	1367	91	91	HNTDB90	pCMVSPORT 3.0
506	874438			4783	872	1105			HFPBQ02	Uni-ZAP XR
507	874447			4784	236	541			HTXSK90	Uni-ZAP XR
508	874449			4785	998	1258			HTECD58	Uni-ZAP XR
509	874452	beta-galactosidase alpha peptide [Cloning vector pSport2] Length = 114	gb AAA67217.1	4786	432	623	82	82	HWLQH59	pSport1
510	874455			4787	9	176			HHEPP22	pCMVSPORT 3.0
511	874458	(AF075724) [Legionella pneumophila] >sp O85769 O85769 HYPOTHETICAL 24.8 KD PROTEIN. Length = 218	gb AAC32842.1	4788	2	823	43	59	HLDDD01	pCMVSPORT 3.0
512	874459	(AF155575) peroxisomal D2,D4-dienoyl-CoA reductase [Mus musculus] >sp Q9WV68 Q9WV68 PEROXISOMAL D2,D4-DIENOYL-COA REDUCTASE. Length = 292	gb AAD38196.1 AF1555	4789	1	531	85	90	HWLRA47	pSport1
513	874460			4790	47	244			HCRMX57	pSport1
514	874461			4791	285	488			HFPEC02	Uni-ZAP XR

515	874467					4792	32	283				HMEEI02	Lambda ZAP II
516	874468					4793	480	743				HKCSZ54	pBluescript
517	874469	!!!! ALU SUBFAMILY SX WARNING ENTRY !!!! Length = 591			sp P39195 ALU8_HUMAN	4794	185	262	59	61		H2CBM49	pBluescript SK-
518	874470	The KIAA0147 gene product is related to adenylyl cyclase. [Homo sapiens] >sp Q14160 Q14160 KIAA0147 PROTEIN (FRAGMENT). Length = 1551			dbj BAA09768.1	4795	2	1213	69	69		HUVGR86	Uni-ZAP XR
519	874472					4796	10	246				HCYBN52	pBluescript SK-
520	874473					4797	186	476				HDPFO58	pCMVSPORT 3.0
521	874474					4798	146	415				H2CBC28	pBluescript SK-
522	874475					4799	724	879				HCRQF18	pSport1
523	874479					4800	36	305				HE2CI70	Uni-ZAP XR
524	874480					4801	360	593				HSPAX64	pSport1
525	874481	!!!! ALU SUBFAMILY SQ WARNING ENTRY !!!! Length = 593			sp P39194 ALU7_HUMAN	4802	39	176	72	77		HCRPE10	pSport1
526	874482					4803	355	612				HTOJA79	Uni-ZAP XR
527	874484					4804	938	1150				HGBGI31	Uni-ZAP XR
528	874485					4805	3	320				HCRMFI2	pSport1
529	874486	(AF000996) ubiquitous TPR motif, Y isoform [Homo sapiens] Length = 1079			gb AAC51843.1	4806	2	187	75	77		HCQDD11	Lambda ZAP II
530	874492					4807	101	325				HCRPA46	pSport1

531	874495	(AL030998) dJ46618.1 (Coagulation Factor V (Activated Protein C Cofactor), Coagulation Factor VIII (Procoagulant Component) and Ceruloplasmin (EC 1.16.3.1, Ferroxidase) LIKE) [Homo sapiens] >sp O75659 O75659 DJ46618.1 (COAGULATION FACTOR V (ACTIVATED PROT	emb CAA1974 2.1	4808	2	562	93	94	HCRPV94	pSport1
532	874498			4809	235	615			HCRPX62	pSport1
533	874499	(AF216312) type II membrane serine protease [Homo sapiens] Length = 423	gb AAF31436.1 AF2163	4810	2	649	98	98	HFKU116	Uni-ZAP XR
534	874503			4811	1	417			HLISB93	pBluescript
535	874504			4812	41	403			HDTLA27	pCMVSPORT 2.0
536	874505	(AF045644) F57H12.7 gene product [Caenorhabditis elegans] >pir T32979 T32979 hypothetical protein F57H12.7 - Caenorhabditis elegans >sp O45100 O45100 F57H12.7 PROTEIN. Length = 262	gb AAC02603.1	4813	3	1094	40	57	HCHCJ20	pSport1
537	874506	(AF153191) nm23-H7 [Homo sapiens] >gb AAD34622.1 AF153191_1 (AF153191) nm23-H7 [Homo sapiens] >sp Q9Y5B8 Q9Y5B8 NM23-H7. Length = 376	gb AAD34622.1 AF1531	4814	1232	798	100	100	HLDOG81	pCMVSPORT 3.0
538	874508	54k protein (AA 1-504) [Canis familiaris] >emb CAA60132.1 SRP 54 [Homo sapiens] >gb AAC50994.1  signal recognition particle [Homo sapiens] >pir S05197 S05197 signal recognition particle 54K protein - dog >pir S54143 S54143 SRP 54 protein - human (fragmen	emb CAA3438.5.1	4815	2	1213	99	99	HPMLY88	Uni-ZAP XR
539	874518			4816	2	199			HIDAC50	pSport1
540	874519			4817	2	271			HLCA01	pSport1
541	874522	(AF099066) serine/threonine-protein kinase NEK3 [Mus musculus] >sp Q9Z0X9 Q9Z0X9 SERINE/THREONINE-PROTEIN KINASE NEK3. Length = 509	gb AAD16286.1	4818	2	463	75	82	HCRNF16	pSport1

542	874524	product specific to adipose tissue [Homo sapiens] >sp Q15847 Q15847 HYPOTHETICAL 7.9 KD PROTEIN. Length = 76	dbj BAA082226 .1	4819	89	277	75	81	HOEKX93	Uni-ZAP XR
543	874527	HUMAN NDR [unidentified] >emb CAA84485.1  Ndr protein kinase [Homo sapiens] >emb CAB39180.1  dJ108K11.2 (Ndr protein kinase) [Homo sapiens] >pir I38133 I38133 protein kinase (EC 2.7.1.-) Ndr - human >sp Q15208 Q15208 NDR PROTEIN KINASE. Length = 465	emb CAA0338 7.1	4820	1	783	93	93	HTTFP72	Uni-ZAP XR
544	874528	(AF062476) retinoic acid-responsive protein; STRA6 [Mus musculus] >sp O70491 O70491 RETINOIC ACID-RESPONSIVE PROTEIN. Length = 670	gb AAC16016 1	4821	1	534	64	77	HCRND05	pSport1
545	874529	similar to Na+/H+ antiporter [Bacillus subtilis] >dbj BAA12644.1  YqkI [Bacillus subtilis] >pir B69967 B69967 Na+/H+ antiporter homolog YqkI - Bacillus subtilis >sp P54571 YQK1_BACSU HYPOTHETICAL NA+/H+ ANTIporter IN ANSB-SPOIIM INTERGENIC REGION. Length	emb CAB1428 8.1	4822	1	534	32	53	HCRNP66	pSport1
546	874531			4823	150	269			HAPCK19	Uni-ZAP XR
547	874533			4824	830	1036			HWLIN80	pSport1
548	874534	(AF022109) HsCdc18p [Homo sapiens] >gb AAB38317.1  Cdc6-related protein [Homo sapiens] >sp Q99741 Q99741 CDC6-RELATED PROTEIN. Length = 560	gb AAC52071. 1	4825	3	920	96	96	HWMBAA02	pSport1
549	874537	(AF034800) liprin-alpha3 [Homo sapiens] >sp AAC26101 AAC26101 Liprin-alpha3 (fragment). Length = 443	gb AAC26101. 1	4826	192	572	83	84	HCRQ174	pSport1
550	874540	(AB014603) KIAA0703 protein [Homo sapiens] >sp O75185 O75185 KIAA0703 PROTEIN. Length = 963	dbj BAA31678 .1	4827	2	235	77	77	HCRMT48	pSport1
551	874543			4828	796	978			HDTJO85	pCMVSPORT 2.0

552	874544			4829	1452	1877				HIBEM35	Other
553	874545	CHOX M product [Gallus gallus] >pir 50145 50145 homeotic protein Hox M - chicken >sp P23459 HXD8_CHICK_HOMEOBOX PROTEIN HOX-D8 (CHOX-M). Length = 188	emb CAA4044 5.1	4830	1	489	75	80		HE9QB35	Uni-ZAP XR
554	874546	centromere autoantigen B (CENP-B) [Homo sapiens] >pir S18735 S18735 centromere protein B - human >sp P07199 CENB_HUMAN MAJOR CENTROMERE AUTOANTIGEN B (CENTROMERE PROTEIN B) (CENP-B). >gb AAB70165.1 (AF002714) centromere protein B; CENP-B [Homo sapiens] {	emb CAA3887 9.1	4831	3	551	72	72		HCHMS55	pSport1
555	874550	peroxisome proliferator activated receptor gamma 2 [Homo sapiens] >gb AAC51248.1  ligand activated transcription factor PPARgamma2 [Homo sapiens] >pir C4859 C4859 peroxisome proliferator- activated receptor gamma-2 - human >sp Q15832 Q15832 PEROXISOME PR	gb AAB04028. 1	4832	1	939	95	95		HCRPG51	pSport1
556	874551	(AF078850) steroid dehydrogenase homolog [Homo sapiens] >sp Q9Y6G8 Q9Y6G8 STEROID DEHYDROGENASE HOMOLOG. Length = 312	gb AAD4482. 1	4833	24	584	99	99		HKMLN95	pBluescript
557	874552			4834	623	919				HMIAD35	Uni-ZAP XR
558	874553	KHS1 [Homo sapiens] >sp Q9Y4K4 Q9Y4K4 KHS1. Length = 846	gb AAB48435. 1	4835	238	1140	91	92		HSYAM68	pCMVSPORT 3.0
559	874556	E2F-related transcription factor [Homo sapiens] >pir A48585 A48585 transcription factor DP-1 - human >sp Q14186 TDP1_HUMAN TRANSCRIPTION FACTOR DP-1 (E2F DIMERIZATION PARTNER 1) (DRTF1- POLYPEPTIDE-1) (DRTF1). Length = 410	gb AAA58440. 1	4836	138	1202	87	87		HDPAM86	pCMVSPORT 3.0
560	874559	(AK001902) unnamed protein product [Homo sapiens] Length = 484	db BAA91969 1	4837	2	790	99	99		HNTMD17	pSport1

561	874560	gap junction protein (aa 1-283) [Homo sapiens] >pir B29005 B29005 gap junction protein Cx32 - human >sp P08034 CXB1_HUMAN GAP JUNCTION BETA-1 PROTEIN (CONNEXIN 32) (CX32) (GAP JUNCTION 28 KD LIVER PROTEIN). Length = 283	emb CAA2785 6.1	4838	47	901	96	96	HEEAX65	Uni-ZAP XR
562	874561	!!!! ALU SUBFAMILY SX WARNING ENTRY !!!! Length = 591	sp P39195 AL U8_HUMAN	4839	2	136	72	77	HHFJL44	Uni-ZAP XR
563	874562	(AB018255) KIAA0712 protein [Homo sapiens] >sp O94820 O94820 KIAA0712 PROTEIN. Length = 1587	dbj BAA34432 .1	4840	3	842	75	76	HWHGD94	pCMV Sport 3.0
564	874563			4841	242	481			HWLAC81	pSport1
565	874564	Nuclear localization signal at AA 569-573, 576-580, 579-583; acidic transcr. activ. domain 620-640;; homeobox motif 653-676 [Homo sapiens] >pir A47456 A47456 down-regulated in adenoma (DRA) - human >sp P40879 DRA_HUMAN DRA PROTEIN (DOWN-REGULATED IN ADENO	gb AAA58443. 1	4842	109	363	86	91	HWLEQ08	pSport1
566	874565			4843	583	828			HSQDM57	Uni-ZAP XR
567	874567	STM-7 [Homo sapiens] >sp Q92749 Q92749 TYPE I PHOSPHATIDYLINOSITOL-4-PHOSPHATE 5-KINASE BETA (EC 2.7.1.68) (STM-7 PROTEIN). >gb AAC50916.1  type I phosphatidylinositol-4-phosphate 5-kinase beta [Homo sapiens] {SUB 112-502} >gb AAC50914.1  type I phosphati	emb CAA6322 4.1	4844	2	1291	93	93	HTEJC93	Uni-ZAP XR
568	874569			4845	123	311			HWLMQ11	pSport1

569	874570	(AL117555) hypothetical protein [Homo sapiens] >emb CAB55990.1 (AL117555) hypothetical protein [Homo sapiens] >pir T17300 T17300 hypothetical protein DKFZp564I1171.1 - human (fragment) >sp CAB55990 CAB55990 Hypothetical 14.8 kd protein (fragment). Length	emb CAB5599 0.1	4846	102	485	75	79	HNSAD12	pSport1
570	874571	NBK [Homo sapiens] >emb CAA18260.2  (AL022237) bK1191B2.2 (BCL2-interacting killer (apoptosis-inducing) (NBK, BP4, BIP1)) [Homo sapiens] >gb AAC50413.1 Bik [Homo sapiens] >gb AAC79124.1 apoptosis inducer NbK [Homo sapiens] >gb AAF01156.1 (AF174424) BCL	emb CAA6201 3.1	4847	3	527	100	100	HBJEN48	Uni-ZAP XR
571	874573	Eps8 [Mus musculus] >pir S39983 S39983 eps8 protein - mouse >sp Q08509 EPS8_MOUSE EPIDERMAL GROWTH FACTOR RECEPTOR KINASE SUBSTRATE EPS8. Length = 821	gb AAA16358. 1	4848	3	539	35	56	HWMBM13	pSport1
572	874577			4849	136	468			H6BSM15	Uni-ZAP XR
573	874578			4850	87	428			HCQBD30	Lambda ZAP II
574	874580	(AF168132) RU1 [Homo sapiens] >sp AAF19794 AAF19794 RU1. Length = 866	gb AAF19794. 1 AF1681	4851	202	1158	82	82	HTEEZ83	Uni-ZAP XR
575	874581			4852	858	1154			HBXCF35	ZAP Express
576	874584			4853	101	277			HWMBF85	pSport1
577	874588	(AL137514) hypothetical protein [Homo sapiens] >emb CAB70780.1 (AL137514) hypothetical protein [Homo sapiens] >sp CAB70780 CAB70780 Hypothetical 11.2 kd protein. Length = 97	emb CAB7078 0.1	4854	154	426	100	100	HCROA06	pSport1
578	874590			4855	686	937			HAPAY77	Uni-ZAP XR
579	874592			4856	304	618			HUSYW93	pSport1

580	874594	(AF123462) neurexin III [Homo sapiens] >sp Q9Y486 Q9Y486 NEUREXIN III (FRAGMENT). Length = 334	gb AAD13621.1	4857	2	496	79	82	HCROE11	pSport1
581	874595			4858	500	643			HWLVF65	pSport1
582	874601			4859	3	260			HWLWU62	pSport1
583	874603	(AF070637) [Homo sapiens] >sp O75547 O75547 HYPOTHETICAL 28.8 KD PROTEIN (FRAGMENT). Length = 256	gb AAC25392.1	4860	708	1139	38	64	HWLFG75	pSport1
584	874605	carcinoembryonic antigen [Homo sapiens] >gb AAB59513.1  carcinoembryonic antigen precursor [Homo sapiens] >pir A36319 A36319 carcinoembryonic antigen precursor - human >sp P06731 CCEM_HUMAN CARCINOEMBRYONIC ANTIGEN PRECURSOR (CEA) (MECONIUM ANTIGEN 100) (	gb AAA51967.1	4861	2	1786	92	92	HBCCB62	Uni-ZAP XR
585	874607	(AL117637) hypothetical protein [Homo sapiens] >emb CAB56026.1  (AL117637) hypothetical protein [Homo sapiens] >pir T17336 T17336 hypothetical protein DKFZp4341225.1 - human (fragment) >sp CAB56026 CAB56026 Hypothetical 45.3 kd protein (fragment). Length	emb CAB56026.1	4862	3	404	90	91	HWLVN89	pSport1
586	874608	A4 protein [Homo sapiens] >gb AAB92356.1  A4 differentiation-dependent protein [Homo sapiens] >gb AAF05827.1 AF196779_4 (AF196779) A4 differentiation-dependent protein [Homo sapiens] >pir S32567 S32567 A4 protein - human >sp Q04941 A4P_HUMAN INTESTINAL ME	gb AAA35499.1	4863	2	628	100	100	HTXQF81	Uni-ZAP XR
587	874609			4864	488	874			HCQDD61	Lambda ZAP II



588	874610	UDP-GaINAc:polypeptide N-acetylglucosaminyltransferase [Homo sapiens] >sp O00208 O00208 UDP-GALNAC:POLYPEPTIDE N-ACETYLGLACTOSAMINYLTRANSFERASE. Length = 578	emb CAA6987 5.1	4865	240	1187	50	66	HMCZ52	Uni-ZAP XR
589	874611			4866	96	755			HDPMG95	pCMVSPORT 3.0
590	874612			4867	103	366			HETAD58	Uni-ZAP XR
591	874614			4868	657	848			HUFAT62	pSport1
592	874615			4869	76	273			HODCH47	Uni-ZAP XR
593	874618	(AK000496) unnamed protein product [Homo sapiens] Length = 239	dbj BAA91205 .1	4870	242	484	66	70	HWLV180	pSport1
594	874619	(AK000213) unnamed protein product [Homo sapiens] Length = 441	dbj BAA91013 .1	4871	29	451	95	95	HNGBW96	Uni-ZAP XR
595	874620	(AC007231) putative cation transport protein [Arabidopsis thaliana] >sp AAD32753 AAD32753 Putative cation transport protein. Length = 300	gb AAD32753.1  AC0072	4872	3	725	44	70	HOSOL09	Uni-ZAP XR
596	874621	carcinoma-associated antigen GA733-2 [Homo sapiens] >gb AAB00775.1  carcinoma-associated antigen GA733-2 [Homo sapiens] >pir B48149 B48149 epithelial glycoprotein antigen GA733-2 precursor - human Length = 314	gb AAA35861.1	4873	6	1130	86	86	HWLMK56	pSport1
597	874622			4874	151	468			HWMBE67	pSport1
598	874623	occludin [Homo sapiens] >gb AAC50451.1  occludin [Homo sapiens] >pir G02533 G02533 occludin - human >sp Q16625 OCLN_HUMAN OCCCLUDIN. Length = 522	gb AAB00195.1	4875	160	432	98	98	H2CAA08	pBluescript SK-
599	874624			4876	749	1012			HCRNH24	pSport1
600	874625			4877	708	971			HUFDO17	pSport1

601	874626				4878	613	870			HE8QX06	Uni-ZAP XR
602	874628				4879	46	363			HWMC68	pSport1
603	874630				4880	1213	1434			HWAG158	pCMVSPORT 3.0
604	874631	p67 myc protein [Homo sapiens] >gb AAA20042.1  c-myc protein [Homo sapiens] {SUB 16-454} >emb CAA46984.1  this region determines c-myc mRNA stability [Homo sapiens] {SUB 395-454} Length = 454	dbj BAA01374.2		4881	58	660	100	100	HAAAA25	pSport1
605	874632				4882	186	365			HHE1W79	pCMVSPORT 3.0
606	874635	(AF068229) lysyl hydroxylase 3 [Homo sapiens] >gb AAC39753.1  (AF046889) lysyl hydroxylase isoform 3 [Homo sapiens] >gb AAD4583.1  AC004876_4 (AC004876) lysyl hydroxylase 3 [Homo sapiens] >sp O60568 PLO3_HUMAN PROCOLLAGEN-LYSINE,2-OXOGLUTARATE 5-DIOXYGENA	gb AAC34808.1		4883	120	2330	97	97	HNGGK17	Uni-ZAP XR
607	874636				4884	236	454			HCRQG35	pSport1
608	874638	(AB007917) KIAA0448 protein [Homo sapiens] >dbj BAA89250.1  (AB024568) heparan sulfate 2-sulfotransferase [Homo sapiens] >sp O75036 O75036 KIAA0448 PROTEIN. >sp BAA89250 BAA89250 Heparan sulfate 2-sulfotransferase. Length = 356	dbj BAA32293.1		4885	175	402	96	97	HSODQ11	Uni-ZAP XR
609	874639				4886	1	282			HWLMR54	pSport1
610	874640	(AF176555) A-kinase anchoring protein 220 [Homo sapiens] >sp AAF07045 AAF07045 A-kinase anchoring protein 220. >dbj BAA31604.1  (AB014529) KIAA0629 protein [Homo sapiens] {SUB 1290-1901} Length = 1901	gb AAF07045.1 AF1765		4887	392	496	95	96	HWLNI19	pSport1

611	874642	interleukin-15 receptor alpha chain precursor [Homo sapiens] >sp Q13261 Q13261 INTERLEUKIN-15 RECEPTOR ALPHA CHAIN PRECURSOR. >gb AAB88175.1  (AF035279) similar to interleukin-15 receptor alpha chain precursor [Homo sapiens] {SUB 37-267} Length = 267	gb AAC50312.1	4888	23	328	73	73	HFPHT42	Uni-ZAP XR
612	874644			4889	673	879			HLWCT94	pCMV Sport 3.0
613	874645			4890	308	532			HWMBL25	pSportl
614	874646			4891	237	464			HWLOU23	pSportl
615	874650			4892	162	479			HWLOZ82	pSportl
616	874651			4893	128	697			HWMBF50	pSportl
617	874652			4894	199	390			HLVAZ23	pSportl
618	874653			4895	444	133			HWLNL53	pSportl
619	874654			4896	154	366			HWLOZ25	pSportl
620	874655			4897	320	625			HWMBV27	pSportl
621	874656			4898	312	470			HCRQH42	pSportl
622	874657			4899	64	201			HWLOR14	pSportl
623	874658			4900	27	260			HWMBB03	pSportl
624	874659			4901	508	651			HWLOW57	pSportl
625	874660			4902	96	227			HWLOO77	pSportl
626	874662			4903	193	318			HWLOZ54	pSportl
627	874665			4904	2	310			HWLMO19	pSportl
628	874667			4905	234	467			HWLMA68	pSportl
629	874670	(AB015614) SET-binding protein (SEB) [Mus musculus] >sp Q9Z180 Q9Z180 SET-BINDING PROTEIN (SEB) (FRAGMENT). Length = 197	dbj BAA36338.1	4906	47	703	79	88	HWLNH87	pSportl
630	874671			4907	208	513			HOOHE79	pSportl
631	874672			4908	35	208			HWLOJ08	pSportl
632	874673	(AF151107) 3'-5' exonuclease TREX2 [Homo sapiens] >sp AAD48776 AAD48776 3'-5' exonuclease TREX2. Length = 236	gb AAD48776.1	4909	1	600	90	90	HBCBF08	Uni-ZAP XR

633	874675					4910	458	655				HWLHG223	pCMVSport 3.0
634	874678					4911	171	293				HWLOP85	pSport1
635	874679	(AL021918) b3418.1 (Kruppel related Zinc Finger protein 184) [Homo sapiens] >sp O60792 O60792 B3418.1 (KRUPPEL RELATED ZINC FINGER PROTEIN 184). Length = 751	emb CAA1727.8.1			4912	1	765	98	98		HUSGX66	pSport1
636	874680					4913	2	355				HCRQM95	pSport1
637	874682	Glucosamine-6-phosphate isomerase (EC 5.3.1.10) [glucosamine-6-phosphate deaminase]. [Escherichia coli] >dbj BAA3326.1  Glucosamine-6-phosphate isomerase (EC 5.3.1.10) (glucosamine-6-phosphate deaminase). [Escherichia coli] >gb AAA24191.1  glucosamine-	dbj BAA3326.1			4914	549	1106	90	90		HPWAI57	Uni-ZAP XR
638	874683					4915	2	424				HWLOQ35	pSport1
639	874684	!!!! ALU SUBFAMILY SB WARNING ENTRY !!!! Length = 587	sp P39189 ALU2_HUMAN			4916	1	150	68	73		HE2EA79	Uni-ZAP XR
640	874688	putative ATPase [Haematobia irritans] >sp P4641 N2B_HAEIR PUTATIVE ATPASE N2B (HFN2B). Length = 464	gb AAA91360.1			4917	3	638	45	66		HWLOI43	pSport1
641	874689					4918	93	389				HCRQM44	pSport1
642	874695					4919	253	924				HCRMZ25	pSport1
643	874696					4920	1	246				HCRQB95	pSport1
644	874697					4921	119	241				HWLXN82	pSport1
645	874699					4922	38	211				HWLXW08	pSport1
646	874700	(AF030881) pol polyprotein [Fugu rubripes] >sp AAC33526 AAC33526 Pol polyprotein (fragment). Length = 1187	gb AAC33526.2			4923	71	349	32	53		HWLVR69	pSport1
647	874701	(AK000385) unnamed protein product [Homo sapiens] Length = 152	dbj BAA91131.1			4924	1	129	78	81		H2CBD62	pBluescript SK-
648	874702					4925	68	397				HMSAQ57	Uni-ZAP XR
649	874703					4926	403	678				HCRD17	pSport1

650	874704	(AB005549) atypical PKC specific binding protein [Rattus norvegicus] >pir T13948 T13948 atypical protein kinase C isotype-specific interacting protein ASIP - rat >sp Q9Z340 Q9Z340 ATYPICAL PKC SPECIFIC BINDING PROTEIN. Length = 1337	dbj BAA34216.1	4927	3	821	78	83	H2CBN90	pBluescript SK-
651	874707	(A1271784) chromokinesin [Homo sapiens] Length = 1232	emb CAB7542.7.1	4928	60	539	100	100	H2CBP17	pBluescript SK-
652	874708	(AK001355) unnamed protein product [Homo sapiens] Length = 291	dbj BAA91645.1	4929	81	989	94	94	HTTDU01	Uni-ZAP XR
653	874709			4930	228	473			H2CBH38	pBluescript SK-
654	874710			4931	1	363			H2CBX48	pBluescript SK-
655	874711			4932	956	1141			H2CBT32	pBluescript SK-
656	874713			4933	260	1105			HAGBH67	Uni-ZAP XR
657	874714	beta-galactosidase [Expression vector pBSII-LUCINT] Length = 69	gb AAB53629.1	4934	339	500	95	100	HE2LX05	Uni-ZAP XR
658	874715	(AK000157) unnamed protein product [Homo sapiens] Length = 301	dbj BAA90980.1	4935	1	876	91	91	HAHCU44	Uni-ZAP XR
659	874717	ORF2: function [Homo sapiens] >sp O76040 O76040 ORF2: FUNCTION. Length = 131	gb AAB61715.1	4936	303	145	73	80	HFRAM50	Uni-ZAP XR
660	874718	POM1 [Plasmodium chabaudi chabaudi] >sp Q25658 Q25658 POM1 (FRAGMENT). Length = 597	gb AAA84746.1	4937	11	811	48	66	HABD60	pCMVSPORT 3.0
661	874719	(AL049989) hypothetical protein [Homo sapiens] >emb CAB43229.1  (AL049989) hypothetical protein [Homo sapiens] >pir T08691 T08691 hypothetical protein DKFZp564F052.1 - human (fragment) >sp Q9Y3Z7 Q9Y3Z7 HYPOTHETICAL 48.5 KD PROTEIN (FRAGMENT). Length = 42	emb CAB43229.1	4938	1	1341	98	98	HTPHK47	Uni-ZAP XR

662	874720	RLF [Homo sapiens] >sp Q13129 Q13129 ZN-15 RELATED ZINC FINGER PROTEIN (RLF). Length = 1914	gb AAC50396.1	4939	1	969	36	49	HAMGM27	pCMVSPORT 3.0
663	874723			4940	25	129			HWLXA56	pSport1
664	874724	CCHA PROTEIN PRECURSOR. [Escherichia coli] >gb AAC75510.1  (AE000332) detox protein [Escherichia coli] >pir H65020 H65020 ccha protein - Escherichia coli (strain K-12) >sp BAA16335 BAA16335 CCHA PROTEIN PRECURSOR.. >sp P77606 EUTM_ECOLI ETHANOLAMINE UTILI	dbj BAA16335.1	4941	176	3	98	98	HBMCMC86	Uni-ZAP XR
665	874725			4942	146	289			HOSPA23	Uni-ZAP XR
666	874726			4943	473	712			HBAHC42	pSport1
667	874727			4944	668	793			HUSGQ45	pSport1
668	874728			4945	396	626			HBMXP34	Uni-ZAP XR
669	874732			4946	1300	1635			HHEME74	pCMVSPORT 3.0
670	874737			4947	81	281			HCNDN66	Lambda ZAP II
671	874741	alanine aminotransferase [Homo sapiens] Length = 493	dbj BAA01186.1	4948	12	842	66	82	H2CBI61	pBluescript SK-
672	874744			4949	111	329			HCQAE09	Lambda ZAP II
673	874745	!!!! ALU SUBFAMILY SQ WARNING ENTRY !!!! Length = 593	sp P39194 ALU7_HUMAN	4950	259	357	75	82	HCNDP23	Lambda ZAP II
674	874746			4951	1	225			HCQBE66	Lambda ZAP II
675	874747			4952	89	178			HCQAK59	Lambda ZAP II

676	874748	fork head-related protein [Homo sapiens] >sp P55318 HN3G_HUMAN HEPATOCYTE NUCLEAR FACTOR 3-GAMMA (HNF-3G) (FORK HEAD-RELATED PROTEIN FKX H3). Length = 347	gb AAA58477.1	4953	3	248	96	96	HCQAR64	Lambda ZAP II
677	874749	unnamed protein product [unidentified] Length = 180	emb CAB6919.5.1	4954	3	302	55	67	HWMAC48	pSportI
678	874750			4955	202	333			HCQBE76	Lambda ZAP II
679	874751			4956	58	261			HWLCA32	pSportI
680	874752			4957	22	354			HWLHH20	pSportI
681	874753			4958	307	492			HCQB172	Lambda ZAP II
682	874754			4959	347	478			HCQBH60	Lambda ZAP II
683	874755			4960	2	166			HHMMB17	pSportI
684	874756			4961	233	442			HCQCB28	Lambda ZAP II
685	874757			4962	1	282			HCQCC66	Lambda ZAP II
686	874758			4963	73	225			HOELS72	Uni-ZAP XR
687	874759			4964	3	125			HCQCB62	Lambda ZAP II
688	874760			4965	1	153			HCQCC13	Lambda ZAP II
689	874763			4966	182	661			HCQCF83	Lambda ZAP II
690	874764			4967	1	171			HCQAF27	Lambda ZAP II
691	874765			4968	929	1132			HCQC156	Lambda ZAP II
692	874766			4969	1	147			HCQCD88	Lambda ZAP II

693	874767	CTP synthetase homolog [Mus musculus] >sp P70303 P70303 CTP SYNTHETASE HOMOLOG (CTPSH). Length = 586	gb AAB17729. I	4970	2	598	70	78	HE8OJ09	Uni-ZAP XR
694	874768			4971	1	219			HCQCR67	Lambda ZAP II
695	874769	expressed ubiquitously with strong expression in brain [Homo sapiens] >gb AAD15417.1  (AC004912) KIAA0193 [Homo sapiens] >sp Q12765 Y193_HUMAN HYPOTHETICAL PROTEIN KIAA0193. >sp AAD15417 AAD15417 KIAA0193. Length = 346	dbj BAA12106 .1	4972	477	1379	47	68	HPHAA27	Uni-ZAP XR
696	874772			4973	209	406			HCROV23	pSport1
697	874773			4974	287	490			HCRMZ75	pSport1
698	874774			4975	171	557			HCRMZ85	pSport1
699	874775			4976	1	162			HCRM08	pSport1
700	874776			4977	312	545			HBIPL82	pCMVSPORT 3.0
701	874778	(AK000025) unnamed protein product [Homo sapiens] Length = 334	dbj BAA90891 .1	4978	539	961	92	92	HBXBV89	ZAP Express
702	874779	hypothetical protein (L1H 3" region) - human Length = 1280	pir B34087 B3 4087	4979	14	250	51	66	HCRPM45	pSport1
703	874780			4980	1	168			HCQCT75	Lambda ZAP II
704	874781			4981	1	237			HCRPO92	pSport1
705	874783			4982	3	314			HCRNM87	pSport1
706	874784			4983	448	642			HBJFU36	Uni-ZAP XR
707	874785			4984	43	330			HCRPZ29	pSport1
708	874786			4985	2	232			HCRON58	pSport1



709	874787	5"-nucleotidase [Homo sapiens] >pir S11032 S11032 5"-nucleotidase (EC 3.1.3.5) precursor - human >sp P21589 NTD_HUMAN 5"-NUCLEOTIDASE PRECURSOR (EC 3.1.3.5) (ECTO- NUCLEOTIDASE) (5"-NT) (CD73 ANTIGEN). >gb AAA96950.1  5"-nucleotidase [Homo sapiens] {	emb CAA3927 1.1	4986	87	947	89	89	HCRNG90	pSport1
710	874788			4987	146	388			HCQDT67	Lambda ZAP II
711	874790	(AB024705) fls485 [Homo sapiens] >sp Q9Y2M2 Q9Y2M2 FLS485. Length = 353	dbj BAA76932 .1	4988	249	605	98	98	HCYAC32	pBluescript SK-
712	874791	(AJ005324) glutamate permease [synthetic construct] >emb CAA06474.1  (AJ005327) glutamate permease [synthetic construct] >emb CAA06477.1  (AJ005330) glutamate permease [synthetic construct] >gb AAA24514.1  gts [Escherichia coli] {SUB 437- 459} Length = 45	emb CAA0647 1.1	4989	11	127	81	87	HCYBK32	pBluescript SK-
713	874793			4990	1	291			HWMCE07	pSport1
714	874795			4991	123	362			HCR0L83	pSport1
715	874796	(AF007551) Bet1p homolog [Homo sapiens] >gb AAD47132.1 AC006378_1 (AC006378) Bet1p homolog [Homo sapiens] >sp O15155 O15155 BET1P HOMOLOG. >sp AAD47132 AAD47132 Bet1p homolog. Length = 118	gb AAB62941. 1	4992	112	522	87	87	HCYBM89	pBluescript SK-
716	874797			4993	53	388			HCRNX33	pSport1
717	874800			4994	505	699			HCYBM31	pBluescript SK-
718	874801			4995	311	415			HDAAX73	pSport1
719	874802			4996	353	469			HDACJ67	pSport1
720	874803			4997	1	471			H2CBL90	pBluescript SK-
721	874804			4998	524	655			HPCOE53	pSport1

722	874805				4999	188	319				HDPGS84	pCMVSPORT 3.0
723	874807				5000	123	236				HCRMQ21	pSPORT1
724	874809				5001	256	357				HDTBM35	pCMVSPORT 2.0
725	874810				5002	3	359				HCYBL83	pBluescript SK-
726	874812				5003	2	220				HDTJE91	pCMVSPORT 2.0
727	874813				5004	306	605				HE6BJ48	Uni-ZAP XR
728	874815	cDNA EST EMBL:M88866 comes from this gene [Caenorhabditis elegans] >pir T20358 T20358 hypothetical protein D2030.8 - Caenorhabditis elegans >sp P90793 P90793 D2030.8 PROTEIN. Length = 648	emb CAA9812 0.1		5005	1	843	33	51		HE8NK63	Uni-ZAP XR
729	874816				5006	618	752				HDTHF30	pCMVSPORT 2.0
730	874818				5007	672	956				HDPY54	pCMVSPORT 3.0
731	874819				5008	516	761				HE2LN12	Uni-ZAP XR
732	874820				5009	78	326				HWLUR88	pSPORT1
733	874821				5010	881	1108				HE8SB04	Uni-ZAP XR
734	874822				5011	108	392				HE9QM31	Uni-ZAP XR
735	874827	(AL117629) hypothetical protein [Homo sapiens] >emb CAB5602.1  (AL117629) hypothetical protein [Homo sapiens] >pir T17331 T17331 hypothetical protein DKFZp434C245.1 - human (fragment) >sp CAB5602 CAB5602.1 Hypothetical 21.0 kd protein (fragment). Length	emb CAB5602 1.1		5012	1	270	73	74		HTELU32	Uni-ZAP XR

736	874828	predicted using Genefinder; Similarity to E.coli guanosine-3", 5"-bis(diphosphate)- pyrophosphohydrolase (SW:P17580) [Caenorhabditis elegans] >pir T28096 T28096 hypothetical protein ZK909.3 - Caenorhabditis elegans >sp O18307 O18307 ZK909.3 PROTEIN. Leng	emb CAB0503 0.1	5013	3	536	47	57	HEMGV90	Uni-ZAP XR
737	874829			5014	17	202			HDTMC78	pCMV Sport 2.0
738	874830			5015	505	774			HFOXN77	pSport1
739	874832	methy thioadenosine phosphorylase [Homo sapiens] >pir I38969 I38969 5"-methy thioadenosine phosphorylase (EC 2.4.2.28) - human >sp Q13126 MTAP_HUMAN 5"- METHYLTHIOADENOSINE PHOSPHORYLASE (EC 2.4.2.28) (MTA PHOSPHORYLASE) (MTAPASE). Length = 283	gb AAA81646. 1	5016	3	155	90	90	HWLMW61	pSport1
740	874835	Gem [Homo sapiens] >pir A54575 A54575 35K GTP-binding protein Gem - human >sp P5040 GEM_HUMAN GTP-BINDING PROTEIN GEM (GTP-BINDING MITOGEN- INDUCED T-CELL PROTEIN) (RAS-LIKE PROTEIN KIR). Length = 296	gb AAA64911. 1	5017	2	1000	94	94	HHFLR55	Uni-ZAP XR
741	874836			5018	249	551			HWLQO14	pSport1
742	874837			5019	95	250			HHGDC54	Lambda ZAP II
743	874843			5020	567	719			HMSCD54	Uni-ZAP XR
744	874844			5021	339	575			HISCH48	pSport1
745	874845			5022	188	424			HHGDL18	Lambda ZAP II
746	874847			5023	2	424			HOSMQ26	Uni-ZAP XR
747	874849			5024	41	130			HISDK89	pSport1

748	874851	M130 antigen [Homo sapiens] >emb CAB45233.1  CD163 [Homo sapiens] >pir 38003 S36077 M130 antigen - human >sp Q07898 Q07898 M130 ANTIGEN PRECURSOR. Length = 1116	emb CAA8054 1.1	5025	62	784	95	96	HLSAA22	pSport1
749	874852			5026	23	178			HFOXR45	pSport1
750	874854			5027	2	589			HWLOV52	pSport1
751	874855			5028	261	488			HKCAA14	Uni-ZAP XR
752	874856	f198 [Escherichia coli] >gb AAC77483.1  (AE000453) orf, hypothetical protein [Escherichia coli] >pir E65179 E65179 hypothetical 22.4 kD protein in tp1'-pssR intergenic region - Escherichia coli (strain K-12) >sp P22788 YIFA_EC01 HYPOTHETICAL 22.4 KD PROT	gb AAA67566. 1.1	5029	390	1	90	91	HMAMA02	Uni-ZAP XR
753	874857			5030	7	402			HKABV02	pCMVSPORT 2.0
754	874858			5031	59	262			HKGBD56	pSport1
755	874859			5032	2	427			HKACE03	pCMVSPORT 2.0
756	874864	(AB022914) TES101RP [Mus musculus] >sp BAA90265 BAA90265 TES101RP. Length = 250	db BAA90265 1.1	5033	3	767	31	50	HBIOR20	pCMVSPORT 3.0
757	874865			5034	3	236			HKEAA44	ZAP Express
758	874866			5035	222	335			HKLSA63	pBluescript
759	874867			5036	491	619			HKGCI22	pSport1
760	874870			5037	796	1062			HOGDO85	pCMVSPORT 2.0
761	874871			5038	1	528			HLDOX53	pCMVSPORT 3.0
762	874873	(AF151842) CGI-84 protein [Homo sapiens] >sp AAD34079 AAD34079 CGI-84 protein. Length = 213	gb AAD34079. 1 AF1518	5039	38	859	80	80	HKAHI56	pCMVSPORT 2.0

763	874875	ORF4 [Rattus norvegicus] >pir S21348 S21348 probable pol protein-related protein 4 - rat >sp Q63306 Q63306 LONG INTERSPERSED REPETITIVE DNA CONTAINING 7 ORF"S. Length = 275	emb CAA3764 7.1	5040	376	444	52	72	HLTBL32	Uni-ZAP XR
764	874876			5041	250	468			HLTHZ36	Uni-ZAP XR
765	874877			5042	48	158			HMEES39	Lambda ZAP II
766	874879			5043	118	378			HMKA091	pSport1
767	874880			5044	317	688			HLYAQ21	pSport1
768	874881	(AF022857) neuropilin-2(b0) [Mus musculus] >sp O35376 O35376 NEUROFILIN 2. Length = 901 1	gb AAC53380. 1	5045	74	490	82	84	HCRNL20	pSport1
769	874885	GTP-binding protein - mouse Length = 198	pir S39543 S39 543	5046	128	730	99	100	HSYDX40	pCMVSPORT 3.0
770	874886	(AK000178) unnamed protein product [Homo sapiens] Length = 358	dbj BAA90992 .1	5047	2	913	90	90	HWLOQ11	pSport1
771	874888	(AF129534) F-box protein Fbx4 [Homo sapiens] >sp AAF04468 AAF04468 F-box protein Fbx4. Length = 387	gb AAF04468. 1 AF1295	5048	409	1170	82	84	HMTAD91	pCMVSPORT 3.0
772	874889			5049	2	136			HOSFI36	Uni-ZAP XR
773	874890			5050	568	849			HHEYM94	pCMVSPORT 3.0
774	874891	SPIN protein [Homo sapiens] >gb AAC08315.1  (AF038969) general transcription factor 2-1 [Homo sapiens] >sp O15359 O15359 SPIN PROTEIN. Length = 957	emb CAA7516 3.1	5051	2	601	87	88	HPWCL64	Uni-ZAP XR
775	874892			5052	2	538			HNTSQ62	pSport1
776	874893	ROK-alpha [Rattus norvegicus] >sp Q62868 Q62868 ROK-ALPHA. Length = 1379	gb AAB37540. 1	5053	177	395	67	71	HRDDU54	Uni-ZAP XR
777	874894			5054	1	180			HRDBA25	Uni-ZAP XR

778	874895				5055	543	758			HSRAJ45	Uni-ZAP XR
779	874896				5056	338	192			HSABG91	pBluescript SK-
780	874897				5057	880	1191			HWLGN30	pSport1
781	874898				5058	2	202			HSPAL74	pSport1
782	874899				5059	149	346			HRDFM44	Uni-ZAP XR
783	874900	sin3 associated polypeptide p18 [Homo sapiens] >gb AAD41090.1 AF153608.1 (AF153608) sin3 associated polypeptide [Homo sapiens] >sp O00422 SP18_HUMAN SIN3 ASSOCIATED POLYPEPTIDE P18. Length = 153	gb AAC51322.1		5060	7	147	74	86	HCYBJ79	pBluescript SK-
784	874902	Cks1 protein homologue [Homo sapiens] >pir B36670 B36670 cell division control protein CKS2 - human >sp P33552 CKS2_HUMAN CYCLIN-DEPENDENT KINASES REGULATORY SUBUNIT 2 (CKS-2). Length = 79	emb CAA3870.3.1		5061	3	341	100	100	HSUBX76	Uni-ZAP XR
785	874903	cDNA EST yk425a6.3 comes from this gene; cDNA EST yk406e6.3 comes from this gene; cDNA EST yk425a6.5 comes from this gene; cDNA EST yk480c6.5 comes from this gene; cDNA EST yk406e6.5 comes from this gene [Caenorhabditis elegans] >sp CAA79619 CAA79619 F02A	emb CAA7961.9.1		5062	184	1044	24	45	HNEAF57	Uni-ZAP XR
786	874904				5063	135	317			HWLRA09	pSport1
787	874905				5064	552	941			HSUSB86	pBluescript

788	874906	bumetanide-sensitive Na-K-Cl cotransporter [Homo sapiens] >pir A57187 A57187 bumetanide-sensitive Na-K-Cl cotransporter - human >sp P55011 NKCI_HUMAN BUMETANIDE-SENSITIVE SODIUM-(POTASSIUM)-CHLORIDE COTRANSPORTER 1 (BASOLATERAL NA-K-CL SYMPORTER). Length	gb AAC50561.1	5065	2	1027	99	99	HOSAK80	Uni-ZAP XR
789	874907	(AF049089) casein kinase I gamma 3 [Homo sapiens] >sp Q9Y6M4 Q9Y6M4 CASEIN KINASE I GAMMA 3. Length = 447	gb AAD26525.1 AF0490	5066	2	196	77	77	HE8TM43	Uni-ZAP XR
790	874908	AH antigen [Homo sapiens] >pir PC4035 PC4035 cell-cycle-dependent 350K nuclear protein - human (fragment) >sp Q13171 Q13171 AH ANTIGEN (FRAGMENT). Length = 1017	gb AAA86889.1	5067	2	235	71	77	HTTBS45	Uni-ZAP XR
791	874909			5068	24	599			HLYA114	pSport1
792	874912			5069	289	405			HODFU18	Uni-ZAP XR
793	874914			5070	22	459			HTXCZ25	Uni-ZAP XR
794	874917			5071	171	548			HWDAU63	pCMVSPORT 3.0
795	874924	homeotic protein Hox-3.6 - mouse >sp P31257 HXCA_MOUSE HOMEBOX PROTEIN HOX-C10 (HOX-3.6). >pir B60941 B60941 homeotic protein hox 31 - human (fragment) {SUB 268-333} >sp P31312 HXXCB_MOUSE HOMEBOX PROTEIN HOX-C11 (HOX-3.7) (FRAGMENT). {SUB 268-327} >gb A	pir A56552 A56552	5072	33	647	88	92	HWHHG74	pCMVSPORT 3.0
796	874925			5073	156	407			HWLIE53	pSport1

797	874926	homeobox protein Cdx1 [Homo sapiens] >sp P47902 CDX1_HUMAN HOMEBOX PROTEIN CDX-1 (CAUDAL-TYPE HOMEBOX PROTEIN 1). >gb AAC50237.1  caudal-type homeobox protein [Homo sapiens] {SUB 63-265} >gb AAA80284.1  caudal-type homeobox protein [Homo sapiens] {SUB 1	gb AAB40602.1	5074	1	183	78	78	HWLLR30	pSport1
798	874927	artifact-warning sequence (translated ALU class B) - human Length = 301	pir B40201 B4 0201	5075	3	173	52	62	HL YCA86	pSport1
799	874928			5076	161	814			HDPTI77	pCMVSPORT 3.0
800	874929			5077	874	1050			HWBDT18	pCMVSPORT 3.0
801	874930	(AL137608) hypothetical protein [Homo sapiens] >emb CAB70840.1 (AL137608) hypothetical protein [Homo sapiens] >sp CAB70840 CAB70840 Hypothetical 46.0 kd protein (fragment). Length = 398	emb CAB70840.1	5078	2	463	31	51	HWLMV62	pSport1
802	874931	neutrophil gelatinase associated lipocalin [Homo sapiens] >sp P80188 NGAL_HUMAN NEUTROPHIL GELATINASE-ASSOCIATED LIPOCALIN PRECURSOR (NGAL) (P25) (25 KD ALPHA-2-MICROGLOBULIN-RELATED SUBUNIT OF MMP-9) (LIPOCALIN-2) (ONCOGENE 24P3). >gb AAD14168.1 S75256_1	emb CAA5812.7.1	5079	2	763	100	100	H2MAC06	pBluescript SK-
803	874932			5080	374	547			HTNAL08	pBluescript SK-
804	874933			5081	114	341			HCQAM40	Lambda ZAP II
805	874934			5082	85	282			HWLQA72	pSport1



806	874936	TFIIIE-beta [Homo sapiens] >gb AAB20414.1  general transcription factor IIE 34 kda subunit, TFIIIE 34 kda subunit [human, Peptide, 291 aa] [Homo sapiens] >pir S29292 S29292 transcription factor TFIIIE-beta - human >sp P29084 T2EB_HUMAN TRANSCRIPTION INITIATI	emb CAA4506 9.1	5083	3	1085	93	93	H2LAD85	pBluescript SK-
807	874937			5084	388	594			HFKHN59	Uni-ZAP XR
808	874938			5085	320	619			HWLRB64	pSport1
809	874939	!!! ALU SUBFAMILY SQ WARNING ENTRY !!!! Length = 593	sp P39194 AL U7_HUMAN	5086	1	63	93	93	HWLQB30	pSport1
810	874944			5087	1	132			HWLRS70	pSport1
811	874946			5088	1	717			HWLRO68	pSport1
812	874951			5089	2	373			HDLAZ62	pCMVSPORT 2.0
813	874957	(AF151831) CGI-73 protein [Homo sapiens] >sp Q9Y382 Q9Y382 CGI-73 PROTEIN. Length = 335	gb AAD34068. 1 AF1518	5090	294	941	31	51	HCRPS91	pSport1
814	874958	ets2 protein [Homo sapiens] >gb AAB94057.1  (AF017257) erythroblastosis virus oncogene homolog 2 protein [Homo sapiens] >pir B32066 TVHUE2 transcription factor ets-2 - human >sp P15036 ETS2_HUMAN C-ETS-2 PROTEIN. >gb AAA52411.1  ets protein [Homo sapiens]	gb AAA52412. 1	5091	3	1607	93	93	HUVFU42	Uni-ZAP XR
815	874962	keratin 18 [Homo sapiens] >gb AAA59463.1  keratin 18 precursor [Homo sapiens] >emb CAA31375.1  cytokeratin 18 [Homo sapiens] >pir S05481 S05481 keratin 18, type I, cytoskeletal - human >sp P05783 K1CR_HUMAN KERATIN, TYPE I CYTOSKELETAL 18 (CYTOKERATIN 18)	gb AAA59461. 1	5092	3	1358	88	88	HDTAC50	pCMVSPORT 2.0
816	874965			5093	94	423			HWLWO06	pSport1
817	874970			5094	3	200			HWLWP88	pSport1

818	874972	tumor-associated antigen [Homo sapiens] >pir A36056 A36056 tumor-associated antigen CO-029 - human >sp P19075 CO02 HUMAN TUMOR-ASSOCIATED ANTIGEN CO-029. Length = 237	gb AAA35709.1	5095	207	929	94	94	HWLHW19	pSport1
819	874973			5096	641	883			HNTAI83	pCMVSPORT 3.0
820	874974			5097	2	310			HWLWS24	pSport1
821	874975			5098	3	431			HWLWP62	pSport1
822	874976	IDN4-GGTR14 PROTEIN >dbj BAA77334.1  (AB019493) IDN4-GGTR9 [Homo sapiens] (SUB 57-414) >emb CAA22908.1  (AL035303) hypothetical protein [Homo sapiens] (SUB 159-414) Length = 414	sp Q9Y6Y5 Q9Y6Y5	5099	1	363	81	87	HOENV16	Uni-ZAP XR
823	874977			5100	61	186			HCRPM57	pSport1
824	874978			5101	84	227			HWLQT35	pSport1
825	874979			5102	689	823			HTWBQ51	pSport1
826	874980			5103	39	209			HWLWS65	pSport1
827	874981			5104	8	175			HCRQC24	pSport1
828	874983	precursor polypeptide (AA -21 to 782) [Homo sapiens] >pir A35954 A35954 endoplasmic precursor - human >sp P14625 ENPL_HUMAN ENDOPLASMIN PRECURSOR (94 KD GLUCOSE-REGULATED PROTEIN) (GRP94) (GP96 HOMOLOG) (TUMOR REJECTION ANTIGEN 1). Length = 803	emb CAA3326.1.1	5105	1	1110	93	93	HTFNM11	pSport1
829	874984			5106	748	939			HFTUG95	pSport1
830	874985			5107	617	808			HSRFC02	Uni-ZAP XR
831	874989			5108	155	448			HCRPC43	pSport1
832	874990	!!!! ALU SUBFAMILY SQ WARNING ENTRY !!!! Length = 593	sp P39194 ALU7_HUMAN	5109	318	362	68	75	HMSPB24	Uni-ZAP XR
833	874991	KIAA0168 [Homo sapiens] >sp P50749 Y168_HUMAN HYPOTHETICAL PROTEIN KIAA0168. Length = 326	dbj BAA11485.1	5110	3	434	40	57	HWLW183	pSport1

834	874992				5111	77	412			HCQB118	Lambda ZAP II
835	874993	calpain [Rattus norvegicus] Length = 703		dbj BAA03369.1	5112	438	713	80	94	HWMBE49	pSport1
836	874994	!!!! ALU SUBFAMILY SC WARNING ENTRY !!!! Length = 585		sp P39192 ALU5_HUMAN	5113	369	449	75	78	HCRPH59	pSport1
837	874995	(AK001568) unnamed protein product [Homo sapiens] Length = 718		dbj BAA91761.1	5114	1	999	98	99	HCRPJ86	pSport1
838	874996				5115	3	146			HCRPH30	pSport1
839	874997	!!!! ALU SUBFAMILY SP WARNING ENTRY !!!! Length = 593		sp P39193 ALU6_HUMAN	5116	259	378	68	77	HCRPH54	pSport1
840	874998				5117	252	347			HCRPH69	pSport1
841	874999	retrovirus-related reverse transcriptase pseudogene - human >sp P08547 LIN1_HUMAN LINE-1 REVERSE TRANSCRIPTASE HOMOLOG. Length = 1259		pir A25313 GNHUL1	5118	330	377	45	68	HWLVX08	pSport1
842	875001	(AB002631) collectin 34 [Homo sapiens] >sp Q9Y6Z7 Q9Y6Z7 COLLECTIN 34. Length = 277		dbj BAA81747.1	5119	64	222	60	77	HKLAA30	Lambda ZAP II
843	875002				5120	346	528			HWLVW59	pSport1
844	875003	mucin 2 precursor, intestinal - human (fragments) >gb AAA59163.1  mucin [Homo sapiens] {SUB 626-1895} >gb AAA59164.1  MUC2 [Homo sapiens] {SUB 2037-3020} >gb AAA36334.1  intestinal mucin [Homo sapiens] {SUB 1916-2193} >gb AAA59861.1  mucin-like protein [H		pir A49963 A43932	5121	3	569	77	80	HWLJN18	pSport1
845	875004				5122	3	677			HCROH01	pSport1
846	875005				5123	147	260			HCRPJ81	pSport1
847	875007				5124	211	423			HETGS43	Uni-ZAP XR
848	875008	cytochrome P450 IID6 [Homo sapiens] Length = 497		gb AAA53500.1	5125	1	552	99	99	HWLRS46	pSport1
849	875009				5126	1	252			HWLRS57	pSport1

850	875011	ubiquinone-binding protein (QP) [Homo sapiens] >gb AAA60238.1  ubiquinone-binding protein precursor [Homo sapiens] >emb CAA31926.1  ubiquinone-binding protein (AA 1 - 111) [Homo sapiens] >pir A32450 A32450 ubiquinone-binding protein QP-C - human >sp P1492	gb AAA60235.1	5127	2	373	98	98	HUSJO81	pSport1
851	875017			5128	62	247			HCRPF66	pSport1
852	875018			5129	460	606			HRMAF73	pSport1
853	875019			5130	3	185			HMSMR90	Uni-ZAP XR
854	875020			5131	281	454			HWLQM66	pSport1
855	875024			5132	146	331			HCRON47	pSport1
856	875025			5133	50	259			HWLRV45	pSport1
857	875027			5134	818	1105			HFGAB06	Uni-ZAP XR
858	875029	!!!! ALU SUBFAMILY SC WARNING ENTRY !!!! Length = 585	sp P39192 AL U5_HUMAN	5135	128	304	82	84	HWLVA35	pSport1
859	875032	(AB014528) KIAA0628 protein [Homo sapiens] >sp O75123 O75123 KIAA0628 PROTEIN. Length = 536	dbj BAA31603 .1	5136	1	210	97	97	HCRPQ86	pSport1
860	875034	!!!! ALU SUBFAMILY SP WARNING ENTRY !!!! Length = 593	sp P39193 AL U6_HUMAN	5137	147	380	89	93	HCROZ20	pSport1
861	875035	(AF132963) CGI-29 protein [Homo sapiens] >sp Q9Y318 Q9Y318 CGI-29 PROTEIN. Length = 242	gb AAD27738.1 AF1329	5138	66	242	100	100	HFPKD18	Uni-ZAP XR
862	875036			5139	94	261			HCR0SS9	pSport1
863	875037			5140	2	226			HCROR65	pSport1
864	875038			5141	44	142			HZAAD77	pSport1
865	875042			5142	178	303			HCRPA12	pSport1
866	875044			5143	1325	1678			HMEKZ86	Lambda ZAP II
867	875045			5144	357	566			HCRPR27	pSport1
868	875046			5145	184	312			HCRPQ46	pSport1
869	875047			5146	75	236			HCRPN09	pSport1

870	875048				5147	35	205			HCRPK03	pSport1
871	875049				5148	138	440			HWLHY62	pSport1
872	875053				5149	81	509			H2CBP44	pBluescript SK-
873	875055				5150	3	242			HCROW75	pSport1
874	875056				5151	1	87			HCROW65	pSport1
875	875058	(AK000361) unnamed protein product [Homo sapiens] Length = 692	dbj BAA91111.1		5152	18	560	99	99	HPICF45	Uni-ZAP XR
876	875059				5153	170	295			HCRON87	pSport1
877	875060				5154	240	632			HIBEL82	Other
878	875061				5155	41	235			HCRPE83	pSport1
879	875062	(AJ009937) nuclear hormone receptor PRR2-A [Homo sapiens] >sp CAB55492 CAB55492 Nuclear hormone receptor PRR2-A. >emb CAB55494.1  (AJ009937) nuclear hormone receptor PRR2-B [Homo sapiens] {SUB 56-397} Length = 397	emb CAB55492.1		5156	3	95	87	90	HWLUQ22	pSport1
880	875063	homeobox protein Gsh-1 [Mus musculus] >pir S63604 S63604 homeobox protein Gsh-1 - mouse >sp P31315 GSHI_MOUSE HOMEBOX PROTEIN GSH-1. >pir A37290 A37290 homeotic protein Gsh-1 - mouse (fragment) {SUB 146-205} >sp G601819 G601819 HPX HOMEBOX PROTEIN (CLON	gb AAA96814.1		5157	1	324	65	67	HCRPE63	pSport1
881	875066	(AF195951) signal recognition particle 68 [Homo sapiens] >sp AAF24308 AAF24308 Signal recognition particle 68. Length = 619	gb AAF24308.1 AAF1959		5158	2	1315	98	99	HCRPE76	pSport1
882	875067				5159	1	825			HCRPE44	pSport1
883	875068				5160	2	439			HCRPE34	pSport1
884	875070	(AF151354) general transcription factor 3 [Homo sapiens] >sp AAF19786 AAF19786 General transcription factor 3. Length = 959	gb AAF19786.1 AAF1513		5161	1	489	96	97	HE8QV20	Uni-ZAP XR

885	875076	(AB007925) KIAA0456 protein [Homo sapiens] >sp O75044 O75044 KIAA0456 PROTEIN (FRAGMENT). >gb AAC52480.1 FBP 27 [Mus musculus] {SUB 756-806} Length = 1095	dbj BAA32301 .1	5162	2	577	69	75	HBIBQ89	Uni-ZAP XR
886	875080	(AB029036) KIAA1113 protein [Homo sapiens] >sp BAA83065 BAA83065 KIAA1113 protein (fragment). Length = 1131	dbj BAA83065 .1	5163	2	958	90	90	HFAAD07	Uni-ZAP XR
887	875081	DIA-12C protein [Homo sapiens] >emb CAB39108.1 (AL031053) dJ267M20.1 (diaphanous (Drosophila, homolog) 2) [Homo sapiens] {SUB 685-906} Length = 1096	emb CAA7586 9.1	5164	16	576	91	91	H2LAY41	pBluescript SK-
888	875088	(AL031673) dJ694B14.1 (PUTATIVE novel KRAB box protein with 18 C2H2 type Zinc finger domains) [Homo sapiens] >sp Q9Y3M9 Q9Y3M9 DJ694B14.1 (PUTATIVE NOVEL KRAB BOX PROTEIN WITH 18 C2H2 TYPE ZINC FINGER DOMAINS) (FRAGMENT). Length = 738	emb CAB4354 8.1	5165	2	799	86	88	HDPIG12	pCMVSPORT 3.0
889	875092	(AL132964) putative protein [Arabidopsis thaliana] >sp CAB62464 CAB62464 Hypothetical 189.6 kd protein. Length = 1672	emb CAB6246 4.1	5166	2	385	42	63	HMVCZ67	pSport1
890	875093	male-enhanced antigen-2 [Mus musculus] >sp P55937 G160_MOUSE GOLGIN-160 (MALE- ENHANCED ANTIGEN-2) (MEA-2). Length = 1325	dbj BAA19612 .1	5167	2	385	56	59	HWLRF06	pSport1
891	875094	zinc finger protein (mkr5) [Mus musculus] >sp P10078 ZF28_MOUSE ZINC FINGER PROTEIN 28 (ZFP-28) (MKR5 PROTEIN) (FRAGMENT). Length = 614	gb AAA37120. 1	5168	2	424	61	66	HTNB190	pBluescript SK-
892	875099			5169	133	312			HWLUZ75	pSport1
893	875100	(AK000196) unnamed protein product [Homo sapiens] Length = 239	dbj BAA91003 .1	5170	36	497	97	99	HDTBD43	pCMVSPORT 2.0
894	875101			5171	1	243			HWLUG07	pSport1

895	875102	[Mus musculus] >pir I30250 I30250 G11 protein - mouse >sp Q61818 Q61818 HYPOTHETICAL 196.0 KD PROTEIN. Length = 1840	dbj BAA06184.1	5172	158	3	69	69	HCRPV30	pSport1
896	875103			5173	9	332			HTPHV54	Uni-ZAP XR
897	875105			5174	172	426			HWLMY30	pSport1
898	875106			5175	29	262			HTTFJ81	Uni-ZAP XR
899	875110			5176	431	826			HDPCC41	pCMVSPORT 3.0
900	875113			5177	243	473			HINAA28	pSport1
901	875114	(AK000388) unnamed protein product [Homo sapiens] Length = 440	dbj BAA91133.1	5178	3	428	69	74	HTEBS63	Uni-ZAP XR
902	875115			5179	384	560			HCROK18	pSport1
903	875118			5180	3	317			HCROK31	pSport1
904	875121	(AK001720) unnamed protein product [Homo sapiens] Length = 605	dbj BAA91860.1	5181	3	653	86	86	HCROE24	pSport1
905	875123	spasmolytic peptide [Homo sapiens] >sp Q03403 SP_HUMAN SPASMOLYTIC POLYPEPTIDE PRECURSOR (SP). Length = 129	gb AAAB05397.1	5182	80	529	87	87	H2CBN19	pBluescript SK-
906	875124			5183	150	329			HD TLM04	pCMVSPORT 2.0
907	875125			5184	266	445			HOCTE49	pSport1
908	875126			5185	129	284			HWLNR78	pSport1
909	875131			5186	487	693			HCEDD96	Uni-ZAP XR
910	875133			5187	3	371			HHFHS96	Uni-ZAP XR
911	875134			5188	71	271			HWLNO90	pSport1
912	875139			5189	79	249			HE2JO22	Uni-ZAP XR
913	875143			5190	106	2			HCYB196	pBluescript SK-

914	875144	(AJ222767) ATPase subunit 6 [Cavia porcellus] >sp CAB51823 CAB51823 ATPase subunit 6. Length = 226	emb CAB5182 3.1	5191	113	169	63	73	HCQDV29	Lambda ZAP II
915	875150			5192	100	285			HCRPQ66	pSport1
916	875151	(AL035071) dJ1085F17.1.1 (ortholog of mouse DNMT3B (DNA Cytosine-5 Methyltransferase 3B1) (isoform 1)) [Homo sapiens] >gb AAD53063.1 AF156488_1 (AF156488) DNA cytosine-5 methyltransferase 3 beta 1 [Homo sapiens] >sp AAD53063 AAD53063 DNA cytosine- 5 methyl	emb CAB5307 0.1	5193	2	979	94	94	HE9RN07	Uni-ZAP XR
917	875154			5194	1	234			HDQEJ55	pCMVSPORT 3.0
918	875156			5195	2	157			HCYBJ95	pBluescript SK-
919	875157			5196	108	218			HCUDX92	ZAP Express
920	875160			5197	3	200			HCRON75	pSport1
921	875165			5198	3	116			HWLNR94	pSport1
922	875174			5199	541	846			HCRPY40	pSport1
923	875177			5200	1066	1299			HHEXW67	pCMVSPORT 3.0
924	875178			5201	1	78			HWLNH10	pSport1
925	875182	(AF170583) ets homologous factor [Homo sapiens] >sp AAF06998 AAF06998 Ets homologous factor. Length = 300	gb AAF06998. 1 AF1705	5202	133	1041	99	99	HDQEG93	pCMVSPORT 3.0
926	875190	(AB015349) HRHFB2063 [Homo sapiens] >sp BAA88120 BAA88120 HRHFB2063 protein (fragment). Length = 269	db BAA88120 .1	5203	3	341	74	88	HWLQT75	pSport1
927	875192			5204	57	194			HCRND03	pSport1



928	875194	(AF102166) intracellular chloride channel CLIC3 [Homo sapiens] >sp O95833 CL13_HUMAN CHLORIDE INTRACELLULAR CHANNEL PROTEIN 3. Length = 207	gb AAD16450.1	5205	3	179	100	100	HCWUO91	ZAP Express
929	875197			5206	77	208			HDTIP90	pCMVSPORT 2.0
930	875198			5207	392	538			HE9TA31	Uni-ZAP XR
931	875200			5208	264	464			HFPBV89	Uni-ZAP XR
932	875203			5209	1099	1407			HWLQZ89	pSport1
933	875205			5210	304	579			HCRMV90	pSport1
934	875206	(AF083105) HMG box factor SOX-13 [Homo sapiens] >sp O95275 O95275 HMG BOX FACTOR SOX-13. Length = 890	gb AAC83687.1	5211	260	1030	76	77	HNBTB35	pSport1
935	875208	(AK000010) unnamed protein product [Homo sapiens] Length = 385	dbj BAA90881.1	5212	359	577	100	100	HCQAW68	Lambda ZAP II
936	875209	!!!! ALU SUBFAMILY SC WARNING ENTRY !!!! Length = 585	sp P39192 ALU5_HUMAN	5213	196	318	57	66	HWLRR89	pSport1
937	875210			5214	170	406			HEICC11	Uni-ZAP XR
938	875211	protein involved in sexual development [Homo sapiens] >sp Q92600 Q92600 CELL DIFFERENTIATION PROTEIN RCD1. Length = 299	dbj BAA13508.1	5215	3	872	95	95	HOHAU31	pCMVSPORT 2.0
939	875214			5216	165	344			HHEVA12	pCMVSPORT 3.0
940	875215	(AK000693) unnamed protein product [Homo sapiens] Length = 452	dbj BAA91324.1	5217	1	279	98	100	HWLPE33	pSport1
941	875223			5218	339	662			HCRME38	pSport1
942	875226	(AK000572) unnamed protein product [Homo sapiens] Length = 328	dbj BAA91263.1	5219	166	582	83	84	HUSFH63	pBluescript
943	875228			5220	114	488			HMWDC28	Uni-ZAP XR

944	875236				5221	887	1183			HUVDJ48	Uni-ZAP XR
945	875238				5222	209	388			HCQBE84	Lambda ZAP II
946	875239	(AF023158) tyrosine phosphatase [Homo sapiens] >sp O43183 O43183 TYROSINE PHOSPHATASE (EC 3.1.3.48). Length = 459	gb AAB88293.1	5223	2	637	84	84		HCYBJ39	pBluescript SK-
947	875240			5224	221	364				HCRMW50	pSport1
948	875246			5225	612	905				HCQDF84	Lambda ZAP II
949	875253	artifact-warming sequence (translated ALU class C) - human Length = 613	pir C40201 C40201	5226	241	408	68	74		HNHOD84	Uni-ZAP XR
950	875254			5227	355	636				HACCF57	Uni-ZAP XR
951	875261			5228	1	72				HHPGU61	Uni-ZAP XR
952	875269	put. Cyt repressor (aa 1-341) [Escherichia coli] >gb AAB03066.1  CG Site No. 887 [Escherichia coli] >gb AAC76916.1  (AE000467) regulator for deo operon, udp, cdd, tsx, nupC, and nupG [Escherichia coli] >pir A24963 RPECCT cyt transcription repressor cytr -	emb CAA2731.8.1	5229	72	470	96	96		HFATS83	Uni-ZAP XR
953	875270	similar to G9a gene. [Homo sapiens] >sp Q15047 Q15047 KIAA0067 PROTEIN. Length = 1291	dbj BAA06689.1	5230	134	916	86	87		HAMFL51	pCMVSPORT 3.0
954	875271			5231	1174	1350				HPLBS64	Uni-ZAP XR
955	875275			5232	1	117				HHFGS83	Uni-ZAP XR
956	875276			5233	2	214				HCQAI83	Lambda ZAP II
957	875277			5234	128	370				HKIAB83	Uni-ZAP XR
958	875278	(AK000553) unnamed protein product [Homo sapiens] Length = 298	dbj BAA91249.1	5235	3	257	98	98		HOUAT80	Uni-ZAP XR

959	875279				5236	187	345			HCUCG82	ZAP Express
960	875280				5237	279	458			HWLMY83	pSport1
961	875281				5238	557	733			HHGDB82	Lambda ZAP II
962	875282				5239	46	207			HHEMA27	pCMV Sport 3.0
963	875287				5240	60	269			HWLQS11	pSport1
964	875288				5241	203	559			HCRNO87	pSport1
965	875292				5242	1	438			HCROJ83	pSport1
966	875296				5243	192	503			HCQDD32	Lambda ZAP II
967	875303				5244	3	1385			HDPQA93	pCMV Sport 3.0
968	875304				5245	2	364			HCQDT68	Lambda ZAP II
969	875305				5246	617	853			HE2RW42	Uni-ZAP XR
970	875306				5247	535	720			HAGDP04	Uni-ZAP XR
971	875307				5248	1	234			HWLRA80	pSport1
972	875308	!!!! ALU SUBFAMILY SQ WARNING ENTRY !!!! Length = 593	sp P39194 ALU7_HUMAN		5249	125	364	64	70	HWLRC80	pSport1
973	875309	!!!! ALU SUBFAMILY J WARNING ENTRY !!!! Length = 591	sp P39188 ALU1_HUMAN		5250	94	273	54	64	HWBBH79	pCMV Sport 3.0
974	875310				5251	674	880			HJMAF44	pCMV Sport 3.0
975	875311				5252	408	569			HWLWT47	pSport1
976	875312	weak similarity to SP:YAD5_CLOAB (P33746) hypothetical protein and to PIR:C48583 stress-inducible protein ST11 [Caenorhabditis elegans] >pir T29012 T29012 hypothetical protein ZK328.7 - Caenorhabditis elegans >sp Q23468 Q23468 SIMILARITY TO SP:YAD5_CLOAB.	gb AAA91253.1		5253	3	299	33	56	HWLVG85	pSport1

977	875313	(AL137496) hypothetical protein [Homo sapiens] >emb CAB70771.1 (AL137496) hypothetical protein [Homo sapiens] >sp CAB70771 CAB70771 Hypothetical 58.1 kd protein (fragment). Length = 521	emb CAB7077 1.1	5254	2	433	98	99	HMVDQ41	pSport1
978	875316			5255	3	170			HCQCM79	Lambda ZAP II
979	875319	(AL031177) dJ889M15.3 (novel protein) [Homo sapiens] >sp O95534 O95534 dJ889M15.3 (NOVEL PROTEIN) (FRAGMENT). Length = 394	emb CAA2011 9.1	5256	145	1446	37	54	HMSGP80	Uni-ZAP XR
980	875324			5257	204	407			HCRNJ78	pSport1
981	875325			5258	31	258			HWLOY24	pSport1
982	875331	tetracycline transporter-like protein [Mus musculus] >pir JCS641 JCS641 sugar transporter protein HiAT1 - mouse >sp P70187 P70187 HIPPOCAMPUS ABUNDANT PROTEIN TRANSCRIPT 1 (TETRACYCLINE TRANSPORTER-LIKE PROTEIN). Length = 490	dbj BAA22622 .1	5259	3	317	84	86	HDQFG33	pCMVSPORT 3.0
983	875332			5260	246	416			HWBCW80	pCMVSPORT 3.0
984	875336			5261	2	76			HCRNL77	pSport1
985	875338			5262	2	292			H2CBI34	pBluescript SK-
986	875341			5263	15	395			HCYBD76	pBluescript SK-
987	875346			5264	372	503			HKMMQ08	pBluescript
988	875347			5265	1	381			HILCJ69	pBluescript SK-

989	875355	regulatory protein [Mus musculus] >emb CAA47648.1  npdcf-1 [Mus musculus] >pir 48691 48691 regulatory protein - mouse >sp Q64322 NPD1_MOUSE NEURAL PROLIFERATION DIFFERENTIATION AND CONTROL PROTEIN-1 PRECURSOR (NPDC-1 PROTEIN). Length = 332	gb AAA39836. 1	5266	464	1138	78	82	HDPGF81	pCMVSPORT 3.0
990	875356	regulatory protein [Mus musculus] >emb CAA47648.1  npdcf-1 [Mus musculus] >pir 48691 48691 regulatory protein - mouse >sp Q64322 NPD1_MOUSE NEURAL PROLIFERATION DIFFERENTIATION AND CONTROL PROTEIN-1 PRECURSOR (NPDC-1 PROTEIN). Length = 332	gb AAA39836. 1	5267	30	341	89	91	HUSGQ41	pSport1
991	875360			5268	711	968			HPMFC89	Uni-ZAP XR
992	875364			5269	429	662			HWLWK37	pSport1
993	875366	(AF050078) growth arrest specific 11 [Homo sapiens] >gb AAC69519.1  (AF050079) growth arrest specific 11 [Homo sapiens] >sp Q95995 Q95995 GROWTH ARREST SPECIFIC 11. Length = 478	gb AAC69518. 1	5270	74	211	95	97	HSYAG49	pCMVSPORT 3.0
994	875367	!!!! ALU SUBFAMILY J WARNING ENTRY !!!! Length = 591	sp P39188 AL U1_HUMAN	5271	152	298	62	65	HAGFQ75	Uni-ZAP XR
995	875371	(AK001527) unnamed protein product [Homo sapiens] Length = 790	dbj BAA91741 .1	5272	94	297	86	86	HCHMQ74	pSport1
996	875372			5273	32	220			HCQCL42	Lambda ZAP II
997	875373	apomucin [Homo sapiens] >pir A57534 A57534 mucin (clone L31) - human (fragment) >sp Q13792 Q13792 APOMUCIN (FRAGMENT). Length = 1042	emb CAA8830 7.1	5274	2	772	97	97	HHFOB15	Uni-ZAP XR
998	875377			5275	94	267			HCRMB64	pSport1
999	875378	(AJ245539) GalNAc-T5 [Homo sapiens] >sp CAB65104 CAB65104 GalNAc-T5 (fragment). Length = 668	emb CAB6510 4.1	5276	1	615	99	99	H2LAB72	pBluescript SK-

1000	875379	(AFI86461) ring finger protein Fxy [Rattus norvegicus] >sp AAD56247 AAD56247 Ring finger protein Fxy. Length = 667	gb AAD56247.1 AFI864	5277	124	687	27	50	HE8OD44	Uni-ZAP XR
1001	875380			5278	274	432			HCRMZ16	pSport1
1002	875381			5279	189	365			HWLMZ75	pSport1
1003	875382			5280	252	503			HWLMT21	pSport1
1004	875384			5281	315	656			HCEMB73	Uni-ZAP XR
1005	875385			5282	485	655			HWLNF24	pSport1
1006	875388			5283	1	183			HNHNC74	Uni-ZAP XR
1007	875391			5284	269	544			HCRNF23	pSport1
1008	875397	KIAA0242 protein [Homo sapiens] >sp Q92575 Q92575 MYELOBLAST KIAA0242 (FRAGMENT). Length = 529	dbj BAA13437.1	5285	120	1790	82	82	HFXXG78	Lambda ZAP II
1009	875402			5286	230	358			HFPFG11	Uni-ZAP XR
1010	875405			5287	153	581			HCRQG59	pSport1
1011	875406			5288	77	220			HLYBH74	pSport1
1012	875410	(AL031033) C321D2.4 (novel protein) [Homo sapiens] >sp CAB53058 CAB53058 C321D2.4 (novel protein) (fragment). Length = 262	emb CAB53058.1	5289	1	696	88	88	HBGKN79	Uni-ZAP XR
1013	875415			5290	53	328			HCQCX73	Lambda ZAP II
1014	875416			5291	111	230			HWLQG73	pSport1
1015	875417			5292	41	190			HMSIB72	Uni-ZAP XR
1016	875418			5293	158	328			HWLMC85	pSport1
1017	875419			5294	872	991			HCRNH72	pSport1
1018	875423			5295	316	462			HSDHD72	Uni-ZAP XR
1019	875425			5296	2	238			HCQAB70	Lambda ZAP II
1020	875427			5297	210	386			HCQDN71	Lambda ZAP II

1021	875428	(AC004955) supported by ESTs T6192 (NID:g665235) and W26450 (NID:g1307167) and Genscan [Homo sapiens] >sp AAD51455 AAD51455 WUGSC:H_DJ1087M19.1 protein. Length = 557	gb AAD51455.1 AC0049	5298	2	550	97	98	HCQCQ73	Lambda ZAP II
1022	875429			5299	251	454			HCQAW10	Lambda ZAP II
1023	875433			5300	2	280			HCRNE71	pSport1
1024	875434			5301	598	822			HWLNY71	pSport1
1025	875437			5302	151	396			HTXSH02	Uni-ZAP XR
1026	875440	similar to protein kinase of X.laevis, has putative transmembrane domain incenral region [Homo sapiens] >sp Q14680 Q14680 KIAA0175 PROTEIN. Length = 651	dbj BAA11492.1	5303	1	816	79	83	H2CBL70	pBluescript SK-
1027	875441	(AF047441) RNA polymerase I 40kD subunit [Homo sapiens] >sp O75395 O75395 RNA POLYMERASE I 40KD SUBUNIT. Length = 342	gb AAC39892.1	5304	80	184	95	95	HNFFQ01	Uni-ZAP XR
1028	875442			5305	294	590			HCRMD70	pSport1
1029	875446			5306	133	330			HWLWX54	pSport1
1030	875452	(AL137489) hypothetical protein [Homo sapiens] >emb CAB70768.1 (AL137489) hypothetical protein [Homo sapiens] >sp CAB70768 CAB70768 Hypothetical 12.7 kd protein (fragment). Length = 116	emb CAB70768.1	5307	115	558	87	87	HDTBL01	pCMVSPORT 2.0
1031	875458			5308	1	231			HTHDF09	Uni-ZAP XR
1032	875460	(AF037448) Gry-rbp [Homo sapiens] >sp O60506 O60506 GRYP-RBP. Length = 623	gb AAC12926.1	5309	1	2112	99	99	HOHAD26	pCMVSPORT 2.0
1033	875461			5310	3	209			HWLQB70	pSport1
1034	875462	(AF086709) NAG-7 protein [Homo sapiens] >sp Q9Y6C7 Q9Y6C7 NAG-7 PROTEIN. Length = 94	gb AAD45398.1	5311	11	358	100	100	HCRN170	pSport1
1035	875463			5312	221	520			HCHAN69	pSport1

1036	875468				5313	218	406				HDPXJ69	pCMVSPORT 3.0
1037	875474				5314	66	872				H2CBP05	pBluescript SK-
1038	875475				5315	1	354				HWLNO16	pSport1
1039	875477				5316	250	498				HCROC40	pSport1
1040	875478				5317	147	377				HWLWW31	pSport1
1041	875479				5318	3	197				HWLOU12	pSport1
1042	875481				5319	1	396				HPTTL69	Uni-ZAP XR
1043	875484				5320	130	273				HT3BA65	Uni-ZAP XR
1044	875486				5321	72	260				HMSHD68	Uni-ZAP XR
1045	875490				5322	456	716				HSUAE53	Uni-ZAP XR
1046	875491				5323	29	265				HTJMN69	pCMVSPORT 2.0
1047	875492				5324	3	296				HHMMMD68	pSport1
1048	875493	mucin 2 precursor, intestinal - human (fragments) >gb AAA59163.1  mucin [Homo sapiens] {SUB 626-1895} >gb AAA59164.1  MUC2 [Homo sapiens] {SUB 2037-3020} >gb AAA36334.1  intestinal mucin [Homo sapiens] {SUB 1916-2193} >gb AAA59861.1  mucin-like protein [H	pir A49963 A4 3932		5325	1	534	97	97		HCQDM23	Lambda ZAP II
1049	875495				5326	140	292				HHEMO68	pCMVSPORT 3.0
1050	875496				5327	460	609				H2CBM67	pBluescript SK-
1051	875498				5328	21	344				HWLWJ34	pSport1
1052	875499				5329	187	387				HWLRL54	pSport1
1053	875500				5330	74	268				HCROI48	pSport1
1054	875501				5331	336	524				HCRMM67	pSport1



1055	875502	NEDD1 PROTEIN (FRAGMENT). >dbj BAA01554.1  nedd-1 protein [Mus musculus] {SUB 16-675} Length = 675	sp P33215 NE D1_MOUSE	5332	2	1213	79	88	HTFNZ86	pSport1
1056	875503			5333	205	402			HCNCD90	Lambda ZAP II
1057	875508	(AB002334) KIAA0336 [Homo sapiens] >sp O15045 O15045 KIAA0336. Length = 1583	dbj BAA20794 .1	5334	2	775	87	89	HMVDK54	pSport1
1058	875512			5335	138	317			HCQCV65	Lambda ZAP II
1059	875514			5336	2	373			HWLNY66	pSport1
1060	875515	(AB023201) KIAA0984 protein [Homo sapiens] >sp Q9Y2I9 Q9Y2I9 KIAA0984 PROTEIN (FRAGMENT). Length = 728	dbj BAA76828 .1	5337	17	424	100	100	HLVCI65	pSport1
1061	875516			5338	2	361			HKAAO67	pCMVSPORT 2.0
1062	875517			5339	126	260			HCE3W64	Uni-ZAP XR
1063	875518	RAS-RELATED PROTEIN R-RAS2 (RAS-LIKE PROTEIN TC21) (TERATOCARCINOMA ONCOGENE). Length = 204	sp P17082 RR A2_HUMAN	5340	22	885	95	95	HKAKX87	pCMVSPORT 2.0
1064	875520	GATA-6 [Homo sapiens] >gb AAC50941.1  hGATA-6 [Homo sapiens] >sp Q92908 GAT6_HUMAN TRANSCRIPTION FACTOR GATA-6 (GATA BINDING FACTOR-6). Length = 449	dbj BAA22621 .1	5341	1	837	99	99	HUSGX12	pSport1
1065	875523			5342	1	165			HCNDZ15	Lambda ZAP II
1066	875525	catalase [Campylobacter jejuni] >pir I40767 I40767 catalase (EC 1.11.1.6) - Campylobacter jejuni >sp Q59296 CATA_CAMJE CATALASE (EC 1.11.1.6). Length = 507	emb CAA5944 4.1	5343	306	130	84	89	HCFNM40	pSport1
1067	875527	(AK001870) unnamed protein product [Homo sapiens] Length = 278	dbj BAA91953 .1	5344	261	569	93	94	HMSGC65	Uni-ZAP XR

1068	875528				5345	3	155			HCQDN81	Lambda ZAP II
1069	875529				5346	389	676			HFICY86	pSport1
1070	875534	HsMcm6 [Homo sapiens] >sp Q14566 MCM6_HUMAN DNA REPLICATION LICENSING FACTOR MCM6 (P105MCM). Length = 821	dbj BAA12699 .1		5347	3	875	96	96	HNTSA70	pSport1
1071	875538				5348	2	100			HWLX64	pSport1
1072	875539				5349	1	162			HTWFG63	pSport1
1073	875543				5350	2	241			HWLNY32	pSport1
1074	875544	ATPase 6 [Homo sapiens] >gb AAB58948.1  ATPase 6 [Homo sapiens] >pir A01049 pWHU6 H+- transporting ATP synthase (EC 3.6.1.34) protein 6 - human mitochondrion >sp P00846 ATP6_HUMAN ATP SYNTHASE A CHAIN (EC 3.6.1.34) (PROTEIN 6). Length = 226	emb CAA2403 .1.1		5351	175	333	71	74	HLJDL64	pCMVSPORT 1
1075	875545	(AF059531) protein arginine N-methyltransferase 3 [Homo sapiens] >sp O60678 O60678 PROTEIN ARGININE N-METHYLTRANSFERASE 3 (FRAGMENT). Length = 512	gb AAC39837. .1		5352	1	555	90	90	HHEQN62	pCMVSPORT 3.0
1076	875546				5353	193	420			HCQAF61	Lambda ZAP II
1077	875547				5354	22	207			HCQCX63	Lambda ZAP II
1078	875548				5355	411	650			HOVET54	pSport1
1079	875550	(AK000399) unnamed protein product [Homo sapiens] Length = 427	dbj BAA91139 .1		5356	108	455	99	100	HRODW53	Uni-ZAP XR
1080	875551	similar to hypothetical protein YM9959.11C of S.cerevisiae. [Homo sapiens] >sp Q14690 RRP5_HUMAN RRP5 PROTEIN HOMOLOG (KIAA0185) (FRAGMENT). Length = 1884	dbj BAA11502 .1		5357	46	597	98	99	H2CBE60	pBluescript SK-
1081	875552				5358	88	318			HWMCK45	pSport1

1082	875553				5359	14	262			HKAFL60	pCMVSPORT 2.0
1083	875554				5360	193	438			HUSXP66	pSport1
1084	875556	beta-galactosidase alpha peptide [Cloning vector pSport2] Length = 114	gb AAA67217.1		5361	328	627	98	98	HTLEY14	Uni-ZAP XR
1085	875558	(AK002174) unnamed protein product [Homo sapiens] Length = 508	dbj BAA92121.1		5362	2	1138	39	58	HOFMV44	pCMVSPORT 2.0
1086	875559	(AC002542) similar to C. elegans F11A10.5; 80% similarity to Z68297 (PID:g1130619) [Homo sapiens] >sp O14577 O14577 WUGSC:H_RG114A06.1 PROTEIN. Length = 434	gb AAB70111.1		5363	3	392	84	88	HSLJN60	Uni-ZAP XR
1087	875560				5364	150	365			HCQAG54	Lambda ZAP II
1088	875563				5365	256	441			HHMMD60	pSport1
1089	875564				5366	799	1038			HWLMB59	pSport1
1090	875565	(AB033011) KIAA1185 protein [Homo sapiens] >sp BAA86499 BAA86499 KIAA1185 protein (fragment). Length = 403	dbj BAA86499.1		5367	2	1081	100	100	HUFAU68	pSport1
1091	875567	IDN4-GGTR14 PROTEIN. >dbj BAA77334.1  (AB019493) IDN4-GGTR9 [Homo sapiens] {SUB 57-414} >emb CAA22908.1  (AL035303) hypothetical protein [Homo sapiens] {SUB 159-414} Length = 414	sp Q9Y6Y5 Q9Y6Y5		5368	2	130	80	82	H2LAX58	pBluescript SK-
1092	875570				5369	524	757			HCRQD82	pSport1
1093	875572				5370	183	323			HCRPV05	pSport1
1094	875573				5371	148	330			HHECM62	pCMVSPORT 3.0
1095	875574				5372	375	542			HFOXW88	pSport1
1096	875578	(AF121775) nasopharyngeal carcinoma susceptibility protein LZ16 [Homo sapiens] >sp AAF24125 AAF24125 Nasopharyngeal carcinoma susceptibility protein LZ16. Length = 366	gb AAF24125.1 AF1217		5373	2	715	50	62	HWLXT17	pSport1

1097	875583				5374	434	667			HODAY72	Uni-ZAP XR
1098	875584				5375	3	164			HCQB156	Lambda ZAP II
1099	875585				5376	283	438			HTTCM45	Uni-ZAP XR
1100	875587				5377	367	612			HARNM58	pCMVSPORT 3.0
1101	875588				5378	150	1019			HMIAQ09	Uni-ZAP XR
1102	875589				5379	156	332			HE9MD57	Uni-ZAP XR
1103	875590				5380	695	1150			HCQDA63	Lambda ZAP II
1104	875594				5381	337	564			HWLRO57	pSport1
1105	875596				5382	303	452			HHEQO60	pCMVSPORT 3.0
1106	875597				5383	371	769			HMUBG89	pCMVSPORT 3.0
1107	875598				5384	134	355			HDPRN70	pCMVSPORT 3.0
1108	875600				5385	234	446			HCRMC33	pSport1
1109	875604				5386	130	351			HROBR56	Uni-ZAP XR
1110	875605				5387	211	402			HWLMU33	pSport1
1111	875606	The KIAA0143 gene product is related to a putative C.elegans gene encoded on cosmid C32D5. [Homo sapiens] >sp Q14156 Y143_HUMAN HYPOTHETICAL PROTEIN KIAA0143 (FRAGMENT). Length = 885	dbj BAA09764.1		5388	1	660	92	92	HCRQC94	pSport1
1112	875608				5389	430	624			HCRMQ55	pSport1
1113	875609				5390	207	569			HSZAF81	Uni-ZAP XR

1114	875610				5391	251	397			HTJMO37	pCMVSPORT 2.0
1115	875611				5392	197	430			HKCSA54	pBluescript
1116	875612				5393	60	206			HWLQA55	pSport1
1117	875613	protein [Homo sapiens] >sp Q14288 Q14288 HYPOTHETICAL PROTEIN (FRAGMENT). Length = 641	gb AAA88038.1		5394	567	653	43	56	HWBDT63	pCMVSPORT 3.0
1118	875625				5395	97	657			H2CBQ54	pBluescript SK-
1119	875628				5396	28	252			HCQCX54	Lambda ZAP II
1120	875629				5397	135	377			HCQCG75	Lambda ZAP II
1121	875630				5398	382	630			HHEZN36	pCMVSPORT 3.0
1122	875631	TAR RNA loop binding protein [Homo sapiens] >pir S62356 S62356 TRP-185 protein - human >sp Q13395 Q13395 TAR RNA LOOP BINDING PROTEIN. Length = 1621	gb AAC50379.1		5399	1	681	89	89	HPCIS18	Other
1123	875632				5400	436	600			HISAT54	pSport1
1124	875633				5401	3	272			HLWAC54	pCMVSPORT 3.0
1125	875634	(AF072759) fatty acid transport protein 4; FATP4 [Mus musculus] >sp O88562 O88562 FATTY ACID TRANSPORT PROTEIN 4 (FATP4) (LONG- CHAIN FATTY ACID TRANSPORT PROTEIN 4) (FRAGMENT). Length = 506	gb AAC40188.1		5402	2	145	86	95	HKMAB82	Uni-ZAP XR
1126	875635	(AB028997) KIAA1074 protein [Homo sapiens] >sp BAA83026 BAA83026 KIAA1074 protein. >dbj BAA91516.1 (AK001137) unnamed protein product [Homo sapiens] {SUB 1-546} >emb CAB70706.1 (AL137351) hypothetical protein [Homo sapiens] {SUB 1337-1709} Length = 1709	dbj BAA83026.1		5403	3	302	50	67	HPVAB96	Uni-ZAP XR

1127	875636				5404	113	226			HBMSX53	Uni-ZAP XR
1128	875638				5405	2043	2228			HCFCSS8	pSport1
1129	875639	(AL022395) dJ273N12.1 (PUTATIVE protein based on EST matches) [Homo sapiens] >gb AAAF04511.1 AF174590_1 (AF174590) F-box protein Fbl4 [Homo sapiens] >sp O95919 O95919 D1273N12.1 (PUTATIVE PROTEIN BASED ON EST MATCHES) (FRAGMENT). >sp AAAF04511 AAAF04511 F-bo	emb CAB3798 .1.1	5406	3	87	89			HPMK129	Uni-ZAP XR
1130	875640	(AB032253) bromodomain adjacent to zinc finger domain 1B [Homo sapiens] >dbj BAA89210.1  (AB032253) bromodomain adjacent to zinc finger domain 1B [Homo sapiens] >sp BAA89210 BAA89210 Bromodomain adjacent to zinc finger domain 1B. Length = 1527	dbj BAA89210 .1	5407	639	93	905	93		HMWFZ60	Uni-ZAP XR
1131	875641	(AF071771) SPH-binding factor [Homo sapiens] Length = 551	gb AAC96102. .1	5408	3	91	968	91		HUCPH16	pSport1
1132	875642			5409	97		288			HCUDA52	ZAP Express
1133	875646			5410	1		81			H1WCN56	pSport1
1134	875650	(AB023416) ASC [Homo sapiens] >sp BAA87339 BAA87339 ASC protein. Length = 195	dbj BAA87339 .1	5411	85	85	699	85	85	HWLUF58	pSport1
1135	875651	(AB023416) ASC [Homo sapiens] >sp BAA87339 BAA87339 ASC protein. Length = 195	dbj BAA87339 .1	5412	8		481	76	78	HWLMI53	pSport1
1136	875653			5413	3		122			HWLMB54	pSport1
1137	875654			5414	449		655			HOEEY53	Uni-ZAP XR

1138	875658	(AL137442) hypothetical protein [Homo sapiens] >emb CAB70739.1 (AL137442) hypothetical protein [Homo sapiens] >sp CAB70739 CAB70739 Hypothetical 34.5 kd protein (fragment). Length = 316	emb CAB7073 9.1	5415	1	558	98	99	HUCQC25	pSport1
1139	875661			5416	440	556			HCRMS71	pSport1
1140	875662			5417	180	341			HWLMS13	pSport1
1141	875663			5418	282	554			HE6GF82	Uni-ZAP XR
1142	875665			5419	1	108			HSPBC14	pSport1
1143	875669			5420	132	419			HOCNE41	pSport1
1144	875672			5421	159	266			HCQBE51	Lambda ZAP II
1145	875673			5422	3	197			HWLWX40	pSport1
1146	875677	(AK000040) unnamed protein product [Homo sapiens] Length = 387	dbj BAA90899 .1	5423	65	265	88	89	HCRMB51	pSport1
1147	875678			5424	246	533			HGBBH61	Uni-ZAP XR
1148	875680	[Homo sapiens] >sp Q99770 Q99770 HYPOTHETICAL 15.4 KD PROTEIN. Length = 139	gb AAB50206. 1	5425	12	86	63	73	HCRNZ51	pSport1
1149	875681			5426	295	540			H2CAA51	pBluescript SK-
1150	875682	(AK000219) unnamed protein product [Homo sapiens] Length = 420	dbj BAA91018 .1	5427	1	504	98	98	HT3A155	Uni-ZAP XR
1151	875683			5428	2	244			HLWBA37	pCMVSPORT 3.0
1152	875687			5429	165	332			HE2LP33	Uni-ZAP XR

1153	875688	(AB021638) X11-like protein 2 [Homo sapiens] >gb AAC72275.1 (AC005954) mint 3 [Homo sapiens]; X11 gamma [Homo sapiens] >pir JG0181 JG0181 X11L2 protein - human >sp Q96018 APB3_HUMAN AMYLOID BETA A4 PRECURSOR PROTEIN-BINDING FAMILY A MEMBER 3 (NEURON- SPEC	dbj BAA74430.1	5430	216	401	91	91	HCRMN10	pSport1
1154	875689			5431	707	1105			HKMMR61	pBluescript
1155	875690			5432	156	347			HUFDC50	pSport1
1156	875697			5433	44	280			HKLAB51	Lambda ZAP II
1157	875698	(AF044953) NADH:ubiquinone oxidoreductase PGIV subunit [Homo sapiens] >sp Q9Y6N0 Q9Y6N0 NADH:UBIQUINONE OXIDOREDUCTASE PGIV SUBUNIT. Length = 172	gb AAD42056.1 AF0449	5434	71	619	100	100	HCGBB63	pSport1
1158	875699	(AB015041) PIF1 [Caenorhabditis elegans] >pir T37310 T37310 PIF1 protein - Caenorhabditis elegans >sp O61299 O61299 PIF1. Length = 677	dbj BAA28677.1	5435	402	596	41	50	HRGDD40	Uni-ZAP XR
1159	875700	IDN4-GGTR14 PROTEIN. >dbj BAA77334.1  (AB019493) IDN4-GGTR9 [Homo sapiens] {SUB 57-414} >emb CAA22908.1 (AL035303) hypothetical protein [Homo sapiens] {SUB 159-414} Length = 414	sp Q9Y6Y5 Q9Y6Y5	5436	11	154	93	93	H2LAD49	pBluescript SK-
1160	875703			5437	3	188			HMSGN49	Uni-ZAP XR
1161	875704	(AK000820) unnamed protein product [Homo sapiens] Length = 122	dbj BAA91388.1	5438	2	490	79	79	HWLMC49	pSport1
1162	875705			5439	1187	1390			HA VME52	Other
1163	875708	(AF113131) host cell factor homolog LCP [Homo sapiens] >dbj BAA91898.1 (AK001771) unnamed protein product [Homo sapiens] >sp Q9Y2U9 Q9Y2U9 HOST CELL FACTOR HOMOLOG LCP. Length = 406	gb AAD21038.1	5440	2	511	44	58	HCQDP49	Lambda ZAP II



1164	875717	(AF074264) LDL receptor-related protein 6 [Homo sapiens] >pir JE0272 JE0272 low density lipoprotein receptor-related protein 6 - human >sp O75581 O75581 LDL RECEPTOR-RELATED PROTEIN 6. Length = 1613	gb AAC33006.1	5441	216	575	81	81	HCROW44	pSport1
1165	875719			5442	101	265			HDPHF03	pCMVSPORT 3.0
1166	875722			5443	553	927			HCRMO82	pSport1
1167	875724			5444	273	1133			HFCDF47	Uni-ZAP XR
1168	875725			5445	528	698			HFICJ16	pSport1
1169	875727			5446	183	482			HWLLU74	pSport1
1170	875728			5447	470	823			HLMDL53	Uni-ZAP XR
1171	875729			5448	10	174			HODBC46	Uni-ZAP XR
1172	875731	(AF060219) RCC1-like G exchanging factor RLG [Homo sapiens] >sp O95199 O95199 RCC1-LIKE G EXCHANGING FACTOR RLG. Length = 551	gb AAC79987.1	5449	192	485	93	98	HCYBO46	pBluescript SK-
1173	875733			5450	251	808			HCUEB32	ZAP Express
1174	875734			5451	141	260			HCRNQ45	pSport1
1175	875736			5452	520	726			HWLOO86	pSport1
1176	875737			5453	1	387			HSPME53	pSport1
1177	875738	(AJ005273) Kin17 [Homo sapiens] >sp O60870 O60870 KIN17 PROTEIN. Length = 393	emb CAA06462.1	5454	16	267	98	100	H2CBE48	pBluescript SK-
1178	875739			5455	145	318			HCQDJ47	Lambda ZAP II
1179	875740			5456	1	138			HDTKC01	pCMVSPORT 2.0
1180	875746			5457	3	194			HCQDI44	Lambda ZAP II

1181	875747	(AL050348) dJ447F3.2 (ubiquitin-conjugating enzyme E2 H10) [Homo sapiens] >gb AAB33362.1  cyclin-selective ubiquitin carrier protein [Homo sapiens] >sp O00762 UBCB_HUMAN UBIQUITIN-CONJUGATING ENZYME E2 H10 (EC 6.3.2.19) (UBIQUITIN-PROTEIN LIGASE) (UBIQUIT	emb CAB6611 8.1	5458	112	330	75	76	HNFGP44	Uni-ZAP XR
1182	875751			5459	2	280			HWLQG44	pSport1
1183	875752			5460	58	207			HHMMD44	pSport1
1184	875753			5461	83	283			HCQAC43	Lambda ZAP II
1185	875754			5462	265	450			HWLUF33	pSport1
1186	875760			5463	321	500			HCRPE66	pSport1
1187	875761			5464	310	441			HCYBD73	pBluescript SK-
1188	875765	reverse transcriptase [Homo sapiens] Length = 361	gb AAB02291.1	5465	61	2	49	60	HWTCF43	Uni-ZAP XR
1189	875766			5466	193	366			HCRNA26	pSport1
1190	875768			5467	240	488			HCQDD42	Lambda ZAP II
1191	875769			5468	2	238			HCRNN21	pSport1
1192	875772			5469	78	812			HCRNH26	pSport1
1193	875773			5470	38	124			HDPWD42	pCMVSPORT 3.0
1194	875774			5471	1	243			HTAET42	Uni-ZAP XR
1195	875778			5472	650	808			HMCIK65	Uni-ZAP XR
1196	875779			5473	2	316			HDTGQ43	pCMVSPORT 2.0

1197	875780	GD3 synthase [Homo sapiens] >gb AAC37586.1  ganglioside-specific alpha-2, 8-polysialyltransferase [Homo sapiens] >pir A54032 A54032 alpha-N- acetylneuraminase alpha-2,8-sialyltransferase (EC 2.4.99.8) - human >sp Q92185 CAG8_HUMAN ALPHA-N-ACETYL-NEURAMINNI	emb CAA5489 1.1	5474	498	863	87	88	HT2SF78	Uni-ZAP XR
1198	875781	ZK520.1 [Caenorhabditis elegans] >pir T27880 T27880 hypothetical protein ZK520.1 - Caenorhabditis elegans >sp O46018 O46018 ZK520.1 PROTEIN. Length = 519	emb CAB0729 9.1	5475	2	712	38	61	HCRM60	pSport1
1199	875782			5476	67	492			HCRNC13	pSport1
1200	875783			5477	142	264			HCRPH74	pSport1
1201	875784			5478	92	283			HCQDW41	Lambda ZAP II
1202	875785			5479	175	318			HCRMZ22	pSport1
1203	875786			5480	220	423			HCQDE41	Lambda ZAP II
1204	875787			5481	230	532			HMKCZ06	pSport1
1205	875789			5482	908	1168			HMEGG05	Lambda ZAP II
1206	875792			5483	156	332			HNTMD41	pSport1
1207	875794	(AK002156) unnamed protein product [Homo sapiens] Length = 326	dbj BAA92113 1.1	5484	2	721	95	97	HCRN124	pSport1
1208	875798			5485	315	455			HWABK33	pCMVSPORT 3.0
1209	875800			5486	282	497			HCYBC44	pBluescript SK-
1210	875801			5487	283	507			HWLQA40	pSport1
1211	875804			5488	1	330			HWHP143	pCMVSPORT 3.0
1212	875805			5489	25	390			HKCSF43	pBluescript

1213	875808					5490	462	752			HCQAD39	Lambda ZAP II
1214	875809	(AJ001714) Myosin-IXA [Homo sapiens] >sp CAA04947 CAA04947 Myosin-IXA (fragment). Length = 774	emb CAA04947.1			5491	207	1088	95	95	HCRNL08	pSport1
1215	875810					5492	2	256			HCRNY14	pSport1
1216	875814	(AF105376) heparan sulfate D-glucosaminyl 3-O-sulfotransferase-3A [Homo sapiens] >sp Q9Y663 Q9Y663 HEPARAN SULFATE D-GLUCOSAMINYL 3-O-SULFOTRANSFERASE-3A (EC 2.8.2.23). Length = 406	gb AAD30208.1 AF1053			5493	3	824	52	54	HCRQG46	pSport1
1217	875815					5494	226	423			HCRQK63	pSport1
1218	875816					5495	149	499			HWLVS38	pSport1
1219	875817	(AL035461) dJ967N21.5 (novel MCM2/3/5 family member) [Homo sapiens] >sp CAB55276 CAB55276 dJ967N21.5 (novel MCM2/3/5 family member) (fragment). Length = 606	emb CAB55276.1			5496	44	556	91	94	HCRNT27	pSport1
1220	875819					5497	12	83			HCRMT24	pSport1
1221	875820					5498	1	222			HCRNQ33	pSport1
1222	875821					5499	22	480			HWLU071	pSport1
1223	875822	ARG5,6 [Candida albicans] >sp P78586 AR56_CANAL ARG5,6 PROTEIN PRECURSOR [CONTAINS: N-ACETYL-GAMMA-GLUTAMYL-PHOSPHATE REDUCTASE (EC 1.2.1.38) (N-ACETYL-GLUTAMATE SEMIALDEHYDE DEHYDROGENASE) (NAGSA DEHYDROGENASE); ACETYLGLUTAMATE KINASE (EC 2.7.2.8) (NAG K	emb CAA6738.3.1			5500	336	761	31	54	HTXRZ02	Uni-ZAP XR
1224	875824					5501	3	302			HWMB047	pSport1
1225	875825	(AF156551) putative E1-E2 ATPase [Mus musculus] >sp AAF09449 AAF09449 Putative E1-E2 ATPase. Length = 1187	gb AAF09449.1 AF1565			5502	3	497	63	78	HCQCC37	Lambda ZAP II

1226	875826					5503	289	450				HUVGY13	Uni-ZAP XR
1227	875828	(AL110217) hypothetical protein [Homo sapiens] >emb CAB53677.1 (AL110217) hypothetical protein [Homo sapiens] >pir T14757 T14757 hypothetical protein DKFZp572C163.1 - human (fragment) >sp CAB53677 CAB53677 Hypothetical 80.6 kd protein (fragment). Length	emb CAB53677.1	5504	3	662	64	74				HPMFM59	Uni-ZAP XR
1228	875832			5505	126	458						HCROJ42	pSport1
1229	875833	(AF192529) RPA-binding trans-activator [Homo sapiens] >sp AAF05761 AAF05761 RPA-binding trans-activator. Length = 196	gb AAF05761.1 AF1925	5506	460	930	65	66				HACBB04	Uni-ZAP XR
1230	875834			5507	276	410						HMMAC34	pSport1
1231	875836			5508	49	522						HDPFA20	pCMVSPORT 3.0
1232	875837			5509	1	162						HTGBQ40	Uni-ZAP XR
1233	875838			5510	177	329						HDPWD53	pCMVSPORT 3.0
1234	875839			5511	1	360						HCROZ63	pSport1
1235	875840			5512	347	547						HWABJ67	pCMVSPORT 3.0
1236	875841			5513	572	865						HCRMV91	pSport1
1237	875845			5514	441	623						HNTRA39	pSport1
1238	875846			5515	437	595						HCRPW33	pSport1
1239	875848			5516	89	187						HFCFI37	Uni-ZAP XR
1240	875849			5517	11	214						HCQCL72	Lambda ZAP II
1241	875850			5518	732	1016						HCQCT09	Lambda ZAP II
1242	875851			5519	1	123						HCRMRI2	pSport1
1243	875852			5520	100	564						HCIAE18	pSport1

1244	875855				5521	137	415			HHFHU39	Uni-ZAP XR
1245	875856				5522	121	264			HCQAW29	Lambda ZAP II
1246	875858				5523	3	509			HBMDM33	pBluescript
1247	875863				5524	2	202			HKLSD32	pBluescript
1248	875864	predicted using Genefinder; cDNA EST yk469a11.5 comes from this gene [Caenorhabditis elegans] >emb CAB01706.1  predicted using Genefinder; cDNA EST yk469a11.5 comes from this gene [Caenorhabditis elegans] >pir T21387 T21387 hypothetical protein F26A3.7 -	emb CAB0654 5.1		5525	1	516	33	50	HYACE34	pCMVSPORT 3.0
1249	875865	DNA binding protein [Homo sapiens] >sp P51523 ZN84_HUMAN ZINC FINGER PROTEIN 84 (ZINC FINGER PROTEIN HPF2). >pir B32891 B32891 finger protein 2, placental - human {SUB 88-738} >sp G238102 G238102 ZINC FINGER. {SUB 71-257} Length = 738	gb AAA79359.1		5526	3	230	98	100	HNTTC18	pSport1
1250	875868	(AF191018) E2IG3 [Homo sapiens] >sp AAF09482 AAF09482 E2IG3. Length = 560	gb AAF09482.1 AF1910		5527	788	1981	82	84	H2CAA34	pBluescript SK-
1251	875871				5528	177	410			HWLQA33	pSport1
1252	875874				5529	24	263			HCQCT65	Lambda ZAP II
1253	875884				5530	2189	2653			HWHPI50	pCMVSPORT 3.0
1254	875886				5531	220	408			HCRQD12	pSport1
1255	875888				5532	26	460			HNHMH31	Uni-ZAP XR
1256	875891	polypeptide BM28 [Homo sapiens] >pir S42228 S42228 replication licensing factor MCM2 - human Length = 892	emb CAA4774 9.1		5533	3	341	100	100	HCRQG23	pSport1

1257	875894	finger protein 1, placental - human >sp P51522 ZN83_HUMAN ZINC FINGER PROTEIN 83 (ZINC FINGER PROTEIN HPF1). Length = 428	pir A32891 A3 2891	5334	1	540	67	79	HKLSB39	pBluescript
1258	875897	ring finger protein - fruit fly (Drosophila melanogaster) Length = 222	pir JC4296 JC4 296	5335	355	846	47	66	H2CBN05	pBluescript SK-
1259	875899			5336	60	224			HCQDT85	Lambda ZAP II
1260	875900			5337	1	192			HARAJ31	pBluescript SK-
1261	875904			5338	351	554			HCRMQ35	pSport1
1262	875905			5339	3	341			HMUBG30	pCMVSPORT 3.0
1263	875906			5340	83	181			HCQAH30	Lambda ZAP II
1264	875907	(AJ131890) DNA polymerase lambda [Homo sapiens] >gb AAF27541.1 AF161019_1 (AF161019) DNA polymerase beta-N [Homo sapiens] >sp CAB65074 CAB65074 DNA polymerase lambda. >sp AAF27541 AAF27541 DNA polymerase beta-N. Length = 575	emb CAB6507 4.1	5341	1	189	93	100	HWDH30	pCMVSPORT 3.0
1265	875908			5342	67	252			HCQAM30	Lambda ZAP II
1266	875912	(AF151847) CGI-89 protein [Homo sapiens] >sp Q9Y397 Q9Y397 CGI-89 PROTEIN. Length = 382	gb AAD34084. 1 AF1518	5343	1	951	63	76	HAGEA31	Uni-ZAP XR
1267	875913			5344	618	845			HCROZ66	pSport1
1268	875914			5345	479	829			HDPBY50	pCMVSPORT 3.0
1269	875915			5346	1153	1353			HDTKD18	pCMVSPORT 2.0
1270	875923	(AB002371) KIAA0373 [Homo sapiens] >sp O15078 O15078 KIAA0373. Length = 1539	dbj BAA20828 .1	5347	1567	623	83	83	HHPGT16	Uni-ZAP XR

1271	875924	(AF155739) axotrophin [Mus musculus] >sp Q9WV66 Q9WV66 AXOTROPHIN. Length = 693	gb AAD38411.1 AF1557	5548	1	573	53	61	H2CBF28	pBluescript SK-
1272	875925	(AL117635) hypothetical protein [Homo sapiens] >emb CAB56025.1 AL117635) hypothetical protein [Homo sapiens] >pir T17335 T17335 hypothetical protein DKFZp434G145.1 - human (fragment) >sp CAB56025 CAB56025 Hypothetical 21.0 kd protein (fragment). Length	emb CAB56025.1	5549	54	434	89	92	HCQDM28	Lambda ZAP II
1273	875926			5550	2	268			HUKFO71	Lambda ZAP II
1274	875927	(AJ242739) mitochondrial tryptophanyl-tRNA synthetase [Homo sapiens] >sp CAB63107 CAB63107 Mitochondrial tryptophanyl-tRNA synthetase precursor (EC 6.1.1.2). Length = 360	emb CAB63107.1	5551	1	294	87	90	HCQAT28	Lambda ZAP II
1275	875932			5552	206	427			HCYBC56	pBluescript SK-
1276	875933			5553	362	556			HAAAC11	pSport1
1277	875934			5554	148	393			HNHO184	Uni-ZAP XR
1278	875935			5555	224	364			HRABT72	pCMVSPORT 3.0
1279	875936	(AK000070) unnamed protein product [Homo sapiens] Length = 277	dbj BAA090925.1	5556	1	336	99	99	HWLEG68	pSport1
1280	875937	(AK000070) unnamed protein product [Homo sapiens] Length = 277	dbj BAA090925.1	5557	1	456	96	98	HSIDV66	Uni-ZAP XR
1281	875938	(AF102851) dolichyl-P-Glc:Man9GlcNAc2-PP-dolichyl glucosyltransferase [Homo sapiens] >sp Q9Y672 Q9Y672 DOLICHYL-P-GLC:MAN9GLCNAC2-PP-DOLICHYL GLUCOSYLTRANSFERASE. Length = 507	gb AAD41466.1 AF1028	5558	1	507	82	82	HWAAD15	pCMVSPORT 3.0
1282	875939			5559	129	329			HUFFD27	pSport1
1283	875940			5560	3	347			HWLMZ30	pSport1



1284	875941	(AF048722) ALL1 responsive protein ARP1c [Homo sapiens] Length = 324	gb AAC39718.1	5561	288	917	74	74	H2LAJ89	pBluescript SK-
1285	875942			5562	1252	1554			HSPBY20	pSport1
1286	875946			5563	512	162			HE2DS24	Uni-ZAP XR
1287	875950			5564	191	355			HSLFO26	Uni-ZAP XR
1288	875951			5565	149	289			HCQAH22	Lambda ZAP II
1289	875952			5566	22	129			HHEYK87	pCMVSPORT 3.0
1290	875954			5567	3	203			HCRQN90	pSport1
1291	875955			5568	424	672			HCQDT05	Lambda ZAP II
1292	875967			5569	101	274			HACBI44	Uni-ZAP XR
1293	875971			5570	874	1200			HHEWX30	pCMVSPORT 3.0
1294	875972	hypothetical protein - human transposon MER37 Length = 138	pir S72482 S72482	5571	368	66	77	81	HCQCL24	Lambda ZAP II
1295	875974			5572	81	200			HE8NK61	Uni-ZAP XR
1296	875976	(AF126743) DNAJ domain-containing protein MCJ [Homo sapiens] >sp Q9Y5T4 Q9Y5T4 DNAJ DOMAIN-CONTAINING PROTEIN MCJ. Length = 150	gb AAD38506.1 AF1267	5573	3	179	86	88	HWLCA48	pSport1
1297	875982			5574	451	603			HUCOR05	pSport1
1298	875983			5575	201	380			HWAIC77	pCMVSPORT 3.0
1299	875984			5576	241	456			HWMBG80	pSport1
1300	875989			5577	126	317			HTXFU22	Uni-ZAP XR
1301	875990			5578	285	413			HCQDO49	Lambda ZAP II

1302	875991	70 kD tumor-specific antigen [Rattus norvegicus] >sp O35828 W70T_RAT 70 KD WD-REPEAT TUMOR-SPECIFIC ANTIGEN (FRAGMENT). Length = 443	emb CAA7533 9.1	5579	3	431	87	90	HDPOZ22	pCMVSPORT 3.0
1303	875994	!!!! ALU SUBFAMILY SB WARNING ENTRY !!!! Length = 587	sp P39189 AL U2_HUMAN	5580	164	364	61	69	HWLQA90	pSport1
1304	875995			5581	170	367			HATBS19	Uni-ZAP XR
1305	875996			5582	289	447			HHSFJ11	Uni-ZAP XR
1306	875998			5583	244	417			HCYBA19	pBluescript SK-
1307	875999			5584	1	234			HAPQW21	Uni-ZAP XR
1308	876001			5585	107	268			HCNND16	pSport1
1309	876006			5586	193	459			HSPME68	pSport1
1310	876007			5587	194	352			HCRMC21	pSport1
1311	876008			5588	1	138			HLWCB78	pCMVSPORT 3.0
1312	876011			5589	329	502			HWLME80	pSport1
1313	876012			5590	629	862			HKTAB46	Uni-ZAP XR
1314	876013			5591	1	126			H2CBJ20	pBluescript SK-
1315	876018	(AC004983) similar to PID:g3877944 [Homo sapiens] >sp O95766 O95766 WUGSC:H_DJ1163J12.2 PROTEIN. >emb CAB43318.1 (AL050215) hypothetical protein [Homo sapiens] {SUB 88-482} Length = 482	gb AAD15546. 1	5592	2	1507	99	99	HWBDR92	pCMVSPORT 3.0
1316	876019			5593	28	213			HWMBI92	pSport1
1317	876021	(AF090915) PRO0310p1 [Homo sapiens] >sp AAF24034 AAF24034 PRO0310p1. Length = 226	gb AAF24034. 1 AF0909	5594	269	1627	92	92	HWMFU50	pSport1

1318	876022				5595	126	317			HCQCM19	Lambda ZAP II
1319	876023	cytoplasmic linker protein-170 alpha-2 [Homo sapiens] >pir A43336 A43336 microtubule-vesicle linker CLIP-170 - human Length = 1392	gb AAA35693.1		5596	178	1098	89	89	HBWCF70	ZAP Express
1320	876024				5597	87	440			HCRON30	pSport1
1321	876025				5598	85	168			HCNAK16	Lambda ZAP II
1322	876026				5599	42	242			HCQDG19	Lambda ZAP II
1323	876027				5600	117	266			HCQAD16	Lambda ZAP II
1324	876028				5601	68	220			HCQAS16	Lambda ZAP II
1325	876029	(AF045459) Etk/Bmx cytosolic tyrosine kinase [Homo sapiens] >sp O60564 O60564 ETK/BMX CYTOSOLIC TYROSINE KINASE. Length = 697	gb AAC08966.1		5602	1	429	98	98	HGBBG01	Uni-ZAP XR
1326	876030	!!!! ALU SUBFAMILY SP WARNING ENTRY !!!! Length = 593	sp P39193 ALU6 HUMAN		5603	2	130	54	56	HILBF13	pBluescript SK-
1327	876034				5604	66	314			HCQDI18	Lambda ZAP II
1328	876039	[Homo sapiens] >sp P78514 P78514 HYPOTHETICAL 48.1 KD PROTEIN (FRAGMENT). Length = 429	gb AAB61919.1		5605	3	1289	99	99	HEMGF10	Uni-ZAP XR
1329	876044				5606	7	183			HCQDG10	Lambda ZAP II
1330	876045				5607	981	1271			H2CBS17	pBluescript SK-
1331	876048	novel transcript; similar to transcription factors activation domains; linked at 5' end to AT hook motif of HMGI-C. Method: conceptual translation supplied by author [Homo sapiens] >pir I39058 I39058 hypothetical protein - human (fragment) Length = 70	gb AAA81016.1		5608	431	586	51	62	HETJT76	Uni-ZAP XR

1332	876052	beta-galactosidase alpha peptide [Cloning vector pSport1] >sp Q46478 Q46478 BETA-GALACTOSIDASE ALPHA PEPTIDE (FRAGMENT). Length = 113	gb AAA73456.2	5609	130	276	84	87	HMVBD68	pSport1
1333	876056			5610	1	126			HWLQD17	pSport1
1334	876057			5611	1	255			HCRME16	pSport1
1335	876059			5612	76	348			HCQC116	Lambda ZAP II
1336	876062			5613	252	488			HKLAB15	Lambda ZAP II
1337	876065			5614	92	748			HCYBH57	pBluescript SK-
1338	876070			5615	34	111			HCQDM08	Lambda ZAP II
1339	876078			5616	242	538			HSSEA17	Uni-ZAP XR
1340	876079			5617	409	609			HCQDG14	Lambda ZAP II
1341	876081			5618	209	451			HCQAQ14	Lambda ZAP II
1342	876082			5619	2	145			HCQBN16	Lambda ZAP II
1343	876086			5620	267	587			HWLQE13	pSport1
1344	876088			5621	26	181			HWMB501	pSport1
1345	876089			5622	97	228			HKLAA70	Lambda ZAP II
1346	876090	(AF105424) brush border myosin I [Homo sapiens] >gb AAD31189.1 AF127026_1 (AF127026) brush border myosin I [Homo sapiens] >sp AAC78645 AAC78645 Brush border myosin I. >sp AAD31189 AAD31189 Brush border myosin I. >gb AAA20900.1  myosin [Homo sapiens] {SUB	gb AAC78645.1	5623	3	305	97	97	HWLCK07	pSport1
1347	876091			5624	172	390			HISAV29	pSport1
1348	876093			5625	77	514			HWLXE78	pSport1

1349	876094	(AE000196) orf, hypothetical protein [Escherichia coli] >pir B64835 B64835 probable iron-sulfur-binding protein b0947 - Escherichia coli >sp P75863 P75863 HYPOTHETICAL 40.6 KD PROTEIN. >dbj BAA35702.1  Hypothetical protein 7.6 [Escherichia coli] {SUB 15-3	gb AAC74033.1	5626	178	2	75	75	HSLHI12	Uni-ZAP XR
1350	876095			5627	143	286			HCQCX03	Lambda ZAP II
1351	876097			5628	117	1			HCQCR12	Lambda ZAP II
1352	876098	!!!! ALU SUBFAMILY J WARNING ENTRY !!!! Length = 591	sp P39188 ALU1_HUMAN	5629	211	288	59	66	HPJBW76	Uni-ZAP XR
1353	876101			5630	1	261			HCQCD81	Lambda ZAP II
1354	876104			5631	78	356			HCYBF60	pBluescript SK-
1355	876105			5632	91	432			HCQCD09	Lambda ZAP II
1356	876107	DEIH-box RNA/DNA helicase [Arabidopsis thaliana] >sp BAA84364 BAA84364 DEIH-box RNA/DNA helicase. Length = 1538	dbj BAA84364.1	5633	631	2	42	59	HWLVY67	pSport1
1357	876108	alpha7 nicotinic acetylcholine receptor subunit [Bos taurus] >sp P54131 ACH7_BOVIN NEURONAL ACETYLCHOLINE RECEPTOR PROTEIN, ALPHA-7 CHAIN PRECURSOR. Length = 499	emb CAA6380.2.1	5634	195	383	80	84	HMAKC34	Uni-ZAP XR
1358	876109			5635	272	535			HNGBJ13	Uni-ZAP XR
1359	876117			5636	1	393			HCFCP28	pSport1

1360	876118	DIF-2 protein [Homo sapiens] >emb CAA65304.1  PRG1 [Homo sapiens] >gb AAC33793.1  (AF083421) radiation-inducible immediate early response gene IEX1 [Homo sapiens] >sp P46695 IEX1_HUMAN RADIATION-INDUCIBLE IMMEDIATE-EARLY GENE IEX-1 (IMMEDIATE EARLY PROTEI	emb CAA7488 6.1	5637	2	499	90	90	HCROH40	pSport1
1361	876121			5638	1	507			HKAAK32	pCMVSPORT 2.0
1362	876123			5639	338	523			HCQDQ31	Lambda ZAP II
1363	876126	similar to Probable rabGAP domains [Caenorhabditis elegans] >pir I27026 I27026 hypothetical protein Y48E1C.3 - Caenorhabditis elegans >sp O18207 O18207 Y48E1C.3 PROTEIN. Length = 619	emb CAB0770 1.1	5640	591	1601	47	65	HHEEN22	pCMVSPORT 3.0
1364	876127			5641	73	234			HRABR73	pCMVSPORT 3.0
1365	876137			5642	329	523			HWMBX68	pSport1
1366	876139			5643	348	596			HE8OF49	Uni-ZAP XR
1367	876140	putative protein [Arabidopsis thaliana] >sp O23175 O23175 HYPOTHETICAL 52.0 KD PROTEIN. Length = 462	emb CAB1678 4.1	5644	1	1221	46	55	HWLHY12	pSport1
1368	876141			5645	98	229			HCQBL07	Lambda ZAP II
1369	876142			5646	2	169			H2LAJ32	pBluescript SK-
1370	876146			5647	19	123			HSIAD07	Uni-ZAP XR
1371	876151			5648	267	584			HWLNZ56	pSport1
1372	876152			5649	154	408			HLQBA23	Lambda ZAP II
1373	876153	(AK000167) unnamed protein product [Homo sapiens] Length = 463	dbj BAA90987 .1	5650	18	824	92	92	HDPQV66	pCMVSPORT 3.0

1374	876155				5651	1102	2193			HODEJ02	Uni-ZAP XR
1375	876156				5652	1	270			HWMBZ31	pSport1
1376	876166				5653	666	977			HLTCX04	Uni-ZAP XR
1377	876168				5654	412	558			HYABC06	pCMVSPORT 3.0
1378	876169				5655	308	427			HLVDI04	pSport1
1379	876170				5656	299	520			HBXFF23	ZAP Express
1380	876172				5657	510	872			HDPBG07	pCMVSPORT 3.0
1381	876174	alternatively spliced product using exon 13A [Homo sapiens] >sp P78525 P78525 MYB PROTO-ONCOGENE PROTEIN (C-MYB). Length = 666	gb AAB49034.1		5658	2	76	65	74	HCYBF02	pBluescript SK-
1382	876177				5659	16	171			HTWDI21	pSport1
1383	876179	dolichol-phosphate-mannose synthase [Homo sapiens] >emb CAB53749.1  (AL034553) d1914P20.1 (dolichyl-phosphate mannosyltransferase polypeptide 1, catalytic subunit) [Homo sapiens] >sp O60762 O60762 DOLICHO-1-PHOSPHATE-MANNOSE SYNTHASE. >sp CAB53749 CAB53749	dbj BAA25646.1		5660	491	345	97	100	HATED01	Uni-ZAP XR
1384	876182	(AB018351) KIAA0808 protein [Homo sapiens] >sp O94900 O94900 KIAA0808 PROTEIN. Length = 526	dbj BAA34528.1		5661	564	1229	44	54	HWLVU14	pSport1
1385	876183				5662	119	262			HOVC112	pSport1
1386	876184				5663	152	433			HCYBB01	pBluescript SK-
1387	876187				5664	102	296			HCRPM32	pSport1
1388	876192	(AB002326) KIAA0328 protein [Homo sapiens] >sp BAA20786 BAA20786 KIAA0328 protein (fragment). Length = 1906	dbj BAA20786.2		5665	3	335	84	87	HLDNV31	pCMVSPORT 3.0
1389	876193				5666	1	387			HCRNN03	pSport1

1390	876198	(AB014603) KIAA0703 protein [Homo sapiens] >sp O75185 O75185 KIAA0703 PROTEIN. Length = 963	dbj BAA31678 1	5667	204	575	78	78	HTPIQ89	Uni-ZAP XR
1391	876200			5668	147	296			HWLQD01	pSport1
1392	876201			5669	80	589			HISAQ01	pSport1
1393	876206			5670	354	602			HCRMCI0	pSport1
1394	876207			5671	418	711			HWABD53	pCMVSPORT 3.0
1395	876208	No definition line found [Escherichia coli] >gb AAC76545.1  (AE000428) putative regulator [Escherichia coli] >pir S47740 S47740 probable transcription regulator (trfF-kdgK intergenic region) - Escherichia coli >sp P37640 YHJB_ECOLI HYPOTHETICAL TRANSCRIPT	gb AAB18496. 1	5672	598	2	100	100	HKCSF17	pBluescript
1396	876209			5673	295	870			HTDAI12	pSport1
1397	876213			5674	302	433			HYABB57	pCMVSPORT 3.0
1398	876215			5675	152	427			HWLVN09	pSport1
1399	876220			5676	135	287			HOHAU02	pCMVSPORT 2.0
1400	876224	desmoglein 2 [Homo sapiens] >pir S38673 S38673 desmoglein 2 - human >sp Q14126 DSG2_HUMAN DESMOGLEIN 2 PRECURSOR (HDGC). Length = 1117	emb CAA8122 6.1	5677	2	1459	83	84	HCRNJ43	pSport1
1401	876226	(AF115384) LR8 [Homo sapiens] >sp Q9Y609 Q9Y609 LR8. Length = 270	gb AAD23440. 1 AF1153	5678	46	978	80	81	HWLGV14	pSport1
1402	876228	(AF038388) actin-filament binding protein Frabin [Rattus norvegicus] >sp O88387 O88387 ACTIN- FILAMENT BINDING PROTEIN FRABIN. Length = 766	gb AAC27698. 1	5679	217	510	74	81	HCYBM15	pBluescript SK-
1403	876229			5680	18	191			HTXOU56	Uni-ZAP XR
1404	876232			5681	834	995			HHFCN93	Uni-ZAP XR



1405	876236	KIAA0020 [Homo sapiens] >sp Q15397 Y020_HUMAN HYPOTHETICAL PROTEIN KIAA0020. Length = 508	dbj BAA02808 .1	5682	1	1458	92	92	H2CBC05	pBluescript SK-
1406	876238	KIAA0094 gene product is related to S.cerevisiae methionine aminopeptidase. [Homo sapiens] >sp P53582 AMPI1_HUMAN PUTATIVE METHIONINE AMINOPEPTIDASE 1 (EC 3.4.11.18) (METAP 1) (PEPTIDASE M 1) (KIAA0094) (FRAGMENT). Length = 394	dbj BAA07679 .1	5683	2	640	83	87	HTEPE28	Uni-ZAP XR
1407	876239	(AC004520) similar to NF-E2-related transcription factors; similar to I48694 (PID:g2137676) [Homo sapiens] >sp Q9Y4A8 Q9Y4A8 WUGSC:H_RG119C02.1 PROTEIN. >dbj BAA76288.1  (AB010812) NF-E2-related factor 3 [Homo sapiens] {SUB 295-694} Length = 694	gb AAC09039 .1	5684	1	837	94	95	HUSGL79	pSport1
1408	876259			5685	2	703			HPMFU84	Uni-ZAP XR
1409	876260			5686	260	598			HDLAD09	pCMVSPORT 2.0
1410	876261			5687	297	530			HCQAW45	Lambda ZAP II
1411	876265	IDN4-GGTR14 PROTEIN. >dbj BAA77334.1  (AB019493) IDN4-GGTR9 [Homo sapiens] {SUB 57-414} >emb CAA22908.1  (AL035303) hypothetical protein [Homo sapiens] {SUB 159-414} Length = 414	sp Q9Y6Y5 Q9 Y6Y5	5688	3	131	90	93	HCYAC01	pBluescript SK-
1412	876266	(AB024057) vascular Rab-GAP/TBC-containing protein [Homo sapiens] >sp Q95759 Q95759 VASCULAR RAB-GAP/TBC-CONTAINING PROTEIN. Length = 897	dbj BAA75489 .1	5689	233	81	100	100	HCROF86	pSport1
1413	876269			5690	398	502			H2CBJ83	pBluescript SK-
1414	876270			5691	9	104			H2LAW73	pBluescript SK-
1415	876274			5692	1	222			HWMCL22	pSport1

1416	876276				5693	189	338			HCRPZ42	pSport1
1417	876277				5694	441	1			HCYBM32	pBluescript SK-
1418	876278				5695	431	604			HCRPI72	pSport1
1419	876280	Thermostable carboxypeptidase (EC 3.4.17.-). [Escherichia coli] >gb AAC74420.1 (AE000231) putative aminohydrolase (EC 3.5.1.14) [Escherichia coli] >pir E64883 E64883 probable amidohydrolase (EC 3.5.-.-) ydaJ - Escherichia coli >sp P77357 YDAJ_ECOLI_HYPOT	dbj BAA14940.1	5696	17	178	96	98		HKCSA58	pBluescript
1420	876281			5697	1	171				HMWFC49	Uni-ZAP XR
1421	876282			5698	368	643				HMSIE02	Uni-ZAP XR
1422	876284			5699	1	366				HCRMZ34	pSport1
1423	876300	(AL034396) dJ1158B12.1 (zinc finger, X-linked, duplicated A) [Homo sapiens] >sp CAB46717 CAB46717 DJ1158B12.1 (zinc finger, X-linked, duplicated A). Length = 799	emb CAB46717.1	5700	2	247	82	82		HTGAM27	Uni-ZAP XR
1424	876304	villin [Homo sapiens] >emb CAA31386.1  villin (AA 1 - 827) [Homo sapiens] >pir A31642 A31642 villin - human >sp P09327 VIL1_HUMAN VILLIN. {SUB 2-827} Length = 827	emb CAA00669.1	5701	34	981	89	89		HCYBI20	pBluescript SK-
1425	876306			5702	31	327				HNEDH18	Uni-ZAP XR
1426	876308	putative precursor (AA 1-304) [Homo sapiens] >emb CAA61579.1  uracil-DNA-glycosylase, UNG1 [Homo sapiens] >pir S05964 A60472 uracil-DNA glycosylase (EC 3.2.2.-) precursor - human >sp P13051 UNG_HUMAN URACIL-DNA GLYCOSYLASE PRECURSOR (EC 3.2.2.-) (UDG). >e	emb CAA33679.1	5703	2	877	96	96		HWMFQ61	pSport1



1441	876372				5718	1	408			HCQB131	Lambda ZAP II
1442	876374				5719	190	390			HTEGD78	Uni-ZAP XR
1443	876376				5720	2	142			HCYBN59	pBluescript SK-
1444	876379				5721	1	300			HCYBC31	pBluescript SK-
1445	876380				5722	2	190			HCQBM44	Lambda ZAP II
1446	876381				5723	145	258			HKCSP75	pBluescript
1447	876382				5724	17	301			HKCSP84	pBluescript
1448	876383				5725	3	242			HPMFF45	Uni-ZAP XR
1449	876385				5726	307	459			HE2CT52	Uni-ZAP XR
1450	876386	!!!! ALU SUBFAMILY SC WARNING ENTRY !!!! Length = 585		sp P39192 ALU5_HUMAN	5727	1	114	77	80	HTNB176	pBluescript SK-
1451	876387				5728	29	364			HE9ND38	Uni-ZAP XR
1452	876395	(AJ271079) hypothetical protein [Oenothera elata subsp. hookeri] >emb CAB67234.1  (AJ271079) hypothetical protein [Oenothera elata subsp. hookeri] >sp CAB67211 CAB67211 Hypothetical 6.7 kd protein. >sp CAB67234 CAB67234 Hypothetical 6.7 kd protein. Length		emb CAB67211.1	5729	729	538	57	68	HPIAK40	Uni-ZAP XR
1453	876397	(AB023235) KIAA1018 protein [Homo sapiens] >sp Q9Y2M0 Q9Y2M0 KIAA1018 PROTEIN. Length = 1017		db JBAA76862.1	5730	1	189	100	100	HHPGD10	Uni-ZAP XR
1454	876398				5731	394	675			HCQB147	Lambda ZAP II
1455	876399				5732	109	321			HE8DW67	Uni-ZAP XR

1456	876400				5733	758	1012			HONAH83	pBluescript SK-
1457	876401				5734	3	371			HHGCW95	Lambda ZAP II
1458	876402	neutral protease large subunit [Homo sapiens] Length = 166	gb AAA65999.1		5735	359	484	79	84	HCYBI75	pBluescript SK-
1459	876404	unnamed protein product [unidentified] Length = 180	emb CAB6919.5.1		5736	2	103	92	92	HCRMK04	pSport1
1460	876405				5737	1	606			H2CBF13	pBluescript SK-
1461	876408				5738	3	107			HKCSO44	pBluescript
1462	876409	reverse transcriptase [Homo sapiens] Length = 361	gb AAB02291.1		5739	405	509	38	52	HWLKU83	pSport1
1463	876418	(AK000307) unnamed protein product [Homo sapiens] Length = 325	dbj BAA91072.1		5740	1	660	98	98	HE9RM22	Uni-ZAP XR
1464	876419				5741	3	116			HCRPQ93	pSport1
1465	876420				5742	1	177			HPDDL36	pBluescript SK-
1466	876422	(AK000515) unnamed protein product [Homo sapiens] Length = 203	dbj BAA91221.1		5743	148	513	93	93	H2CBM09	pBluescript SK-
1467	876425				5744	178	375			HKCAA10	Uni-ZAP XR
1468	876426				5745	98	274			H2CBI25	pBluescript SK-
1469	876427				5746	47	397			HKISB80	pBluescript
1470	876428				5747	1	156			H2CBE84	pBluescript SK-
1471	876431	putative cytoskeletal protein=H4(D10S170) [human, thyroid, Peptide, 585 aa] [Homo sapiens] >pir I58403 I58403 H4 protein - human >sp Q16204 D170_HUMAN H4(D10S170) . PROTEIN. Length = 585	gb AAC60637.1		5748	2	811	85	85	HSEBD08	pCMVSPORT 1
1472	876432				5749	123	323			HPMFM22	Uni-ZAP XR

1473	876435			5750	186	641			HDHEB14	pCMVSPORT 2.0
1474	876436			5751	181	474			HAIDH43	Uni-ZAP XR
1475	876440			5752	149	424			HJAAL27	pBluescript SK-
1476	876441			5753	754	1017			HA5AB14	pSport1
1477	876444			5754	774	857			HWLNS47	pSport1
1478	876447			5755	670	894			HE8UJ03	Uni-ZAP XR
1479	876448	(AK001452) unnamed protein product [Homo sapiens] Length = 718	dbj BAA91700.1	5756	3	1622	86	86	HDTLK03	pCMVSPORT 2.0
1480	876451	placental leucine aminopeptidase [Homo sapiens] >sp Q15145 Q15145 PLACENTAL LEUCINE AMINOPEPTIDASE. Length = 944	dbj BAA09436.1	5757	1	693	85	86	HMTBC69	pCMVSPORT 3.0
1481	876452	(AF151073) HSPC239 [Homo sapiens] Length = 293	gb AAF36159.1 AF1510	5758	87	968	100	100	HMUBP81	pCMVSPORT 3.0
1482	876458	(AF161432) HSPC314 [Homo sapiens] >sp AAF28992 AAF28992 HSPC314 (fragment). Length = 248	gb AAF28992.1 AF1614	5759	3	1295	53	55	HAPOTS8	Uni-ZAP XR
1483	876459			5760	95	271			HCFLR18	pSport1
1484	876464			5761	187	483			HDPAA38	pCMVSPORT 3.0
1485	876465			5762	1	144			HCYBM66	pBluescript SK-
1486	876469			5763	327	629			HPWAY46	Uni-ZAP XR
1487	876470			5764	100	507			HLTAH77	Uni-ZAP XR
1488	876471			5765	1	504			HWLXX39	pSport1
1489	876472	rhomboid-related protein [Homo sapiens] >sp O75783 O75783 RHOMBROID-RELATED PROTEIN. Length = 438	emb CAA7662.9.1	5766	3	407	97	98	HPTWG85	pBluescript

1490	876473	F08C6.6 gene product [Caenorhabditis elegans] >pir T15973 T15973 hypothetical protein F08C6.6 - Caenorhabditis elegans >sp Q19202 Q19202 COSMID F08C6. Length = 296	gb AAA68725. 	5767	2	1054	50	67	HE6BS09	Uni-ZAP XR
1491	876474			5768	150	314			HERAM35	Uni-ZAP XR
1492	876475			5769	618	980			HFIUG54	pSport1
1493	876476	(AF029343) protocadherin 68 [Homo sapiens] >pir T09055 T09055 protocadherin 68 - human >sp O14917 O14917 PROTOCADHERIN 68. Length = 889	gb AAB84144. 	5770	1	573	81	81	HE8CX56	Uni-ZAP XR
1494	876480	Ptx1 [Mus musculus] >sp P70314 PIX1_MOUSE PITUITARY HOMEOBOX 1 (HOMEOBOX PROTEIN P-OTX) (PITUITARY OTX-RELATED FACTOR) (HINDLIMB EXPRESSED HOMEOBOX PROTEIN BACKFOOT). >gb AAC53059.1 hindlimb expressed homeobox protein backfoot [Mus musculus] {SUB 133-315	gb AAB16860. 	5771	1	387	97	97	H2LAQ54	pBluescript SK-
1495	876481	IgG Fc receptor 1 [Homo sapiens] >gb AA36049.1  Fc gamma receptor 1 [Homo sapiens] >pir A39878 A39878 Fc gamma (IgG) receptor I-A- (high affinity) precursor - human >sp Q92663 Q92663 FC GAMMA RECEPTOR I. Length = 374	gb AAA35678. 	5772	3	1199	91	91	HWABG32	pCMVSPORT 3.0
1496	876483			5773	3	494			HMTBE05	pCMVSPORT 3.0
1497	876484	(AB030905) Heterochromatin protein 1 gamma [Homo sapiens] >gb AB48101.1 HP1Hs-gamma [Homo sapiens] >sp Q13185 CBX3_HUMAN CHROMOBOX PROTEIN HOMOLOG 3 (HETEROCHROMATIN PROTEIN 1 HOMOLOG GAMMA) (HP1 GAMMA) (MODIFIER 2 PROTEIN). >sp BAA83340 BAA83340 Hetero	db BAA83340 	5774	455	1006	83	83	HKABL05	pCMVSPORT 2.0

1498	876487	propionyl-CoA carboxylase [Homo sapiens] >pir S04613 A27883 propionyl-CoA carboxylase (EC 6.4.1.3) alpha chain precursor - human >sp P05165 PCCA_HUMAN PROPIONYL-COA CARBOXYLASE ALPHA CHAIN PRECURSOR (EC 6.4.1.3) (PCCASE) (PROPANOYL- COA:CARBON DIOXIDE LIGA	emb CAA3276 3.1	5775	65	292	100	100	HOCTA74	pSport1
1499	876490	ORF 2 (466 aa) [Mus musculus] >sp Q61787 Q61787 ORF 2. Length = 466	emb CAA2736 3.1	5776	602	772	43	55	HWLUU48	pSport1
1500	876491	galectin 3 (version 2) - human Length = 242	pir A49800 A4 9800	5777	1	831	97	97	HULAJ15	pSport1
1501	876494	(AC005326) asparagine synthetase [Homo sapiens] >sp Q15666 Q15666 ASPARAGINE SYNTHETASE. Length = 561	gb AAC62263. 1	5778	166	1860	94	94	HSYAJ64	pCMVSPORT 3.0
1502	876495	UDP-GalNAc:polypeptide N- acetylglucosaminyltransferase (GalNAc-T3) [Homo sapiens] >sp Q14435 Q14435 POLYPEPTIDE N- ACETYLGLACTOSAMINYLTRANSFERASE (EC 2.4.1.41) (PROTEIN-UDP ACETYLGLACTOSAMINYLTRANSFERASE) (UDP-GALNAc:POLYPEPTIDE, N- ACETYLGLACTOSAMINYL	emb CAA6337 1.1	5779	836	1354	78	79	HETIF19	Uni-ZAP XR
1503	876496	(AK000496) unnamed protein product [Homo sapiens] Length = 239	dbj BAA91205 1	5780	294	148	68	77	HL YEA23	pSport1
1504	876498			5781	306	494			HAPQU61	Uni-ZAP XR
1505	876499	(AF151825) CGI-67 protein [Homo sapiens] >sp Q9Y377 Q9Y377 CGI-67 PROTEIN. Length = 293	gb AAD34062. 1 AF1518	5782	465	776	83	93	HE8OT93	Uni-ZAP XR
1506	876503	(AF081281) lysophospholipase [Homo sapiens] >gb AAD26993.1  (AF077198) lysophospholipase [Homo sapiens] >sp O75608 O75608 LYSOPHOSPHOLIPASE. Length = 230	gb AAC31610. 1	5783	3	659	100	100	H2LAB08	pBluescript SK-



1507	876504	LAMP [Homo sapiens] >pir JC4776 JC4776 limbic-system-associated membrane protein precursor - human >sp Q13449 LAMP_HUMAN LIMBIC SYSTEM-ASSOCIATED MEMBRANE PROTEIN PRECURSOR (LSAMP). Length = 338	gb AAC50569.1	5784	129	1106	93	93	HISBB72	pSport1
1508	876507			5785	1	651			HCHBN47	pSport1
1509	876511			5786	572	778			HFADJ29	Uni-ZAP XR
1510	876513			5787	145	579			HWLQP42	pSport1
1511	876518			5788	116	454			HDPAG07	pCMVSPORT 3.0
1512	876524	!!!! ALU SUBFAMILY J WARNING ENTRY !!!! Length = 591	sp P39188 ALU1_HUMAN	5789	882	977	60	67	HLTAR39	Uni-ZAP XR
1513	876526			5790	72	272			HWLRF38	pSport1
1514	876530			5791	687	917			HCRNM09	pSport1
1515	876533			5792	340	699			HOBABE30	pBluescript
1516	876534			5793	240	551			HATCV09	Uni-ZAP XR
1517	876535			5794	193	300			HCRNE16	pSport1
1518	876536			5795	81	368			HCRPV63	pSport1
1519	876538	(AK002149) unnamed protein product [Homo sapiens] Length = 330	dbj BAA92110.1	5796	399	1058	93	93	HSKKP02	pBluescript
1520	876540			5797	3	395			HOVAN13	pSport1
1521	876543	(AL137657) hypothetical protein [Homo sapiens] >emb CAB70862.1 (AL137657) hypothetical protein [Homo sapiens] >sp CAB70862 CAB70862 Hypothetical 12.1 kd protein. Length = 106	emb CAB70862.1	5798	2	718	100	100	HWBEX78	pCMVSPORT 3.0
1522	876544			5799	3	200			HRODG74	Uni-ZAP XR
1523	876545	(AF166261) nuclear protein Sojo [Xenopus laevis] >sp AAD47086 AAD47086 Nuclear protein Sojo. Length = 676	gb AAD47086.1 AF1662	5800	1	519	39	67	HCROK30	pSport1

1524	876546	(AB007891) KIAA0431 [Homo sapiens] >pir T00061 T00061 hypothetical protein KIAA0431 - human >sp O43313 O43313 KIAA0431. Length = 667	dbj BAA24861 .1	5801	352	2508	92	92	HDABK73	pSport1
1525	876548			5802	175	342			HOGCO78	pCMVSPORT 2.0
1526	876549			5803	466	645			HCRNG10	pSport1
1527	876551			5804	1	165			HWLRR08	pSport1
1528	876553	CSA protein [Homo sapiens] >pir A57090 A57090 CSA protein - human >sp Q13216 CSA_HUMAN COCKAYNE SYNDROME WD-REPEAT PROTEIN CSA. Length = 396	gb AAA82605. .1	5805	2	1102	99	99	HTEFP55	Uni-ZAP XR
1529	876557			5806	4	219			HDLAR46	pCMVSPORT 2.0
1530	876558			5807	375	1			H2CBW66	pBluescript SK-
1531	876559	connexin 26 [Homo sapiens] >pir A43424 A43424 gap junction protein Cx26 - human >sp P29033 CXB2_HUMAN GAP JUNCTION BETA-2 PROTEIN (CONNEXIN 26) (CX26). >sp AAD21314 AAD21314 Connexin 26. Length = 226	gb AAD21314. .1	5808	156	836	99	100	HOGDS65	pCMVSPORT 2.0
1532	876560	(AB035443) glycogen-debranching enzyme [Homo sapiens] >dbj BAA88405.1  (AB035443) glycogen- debranching enzyme [Homo sapiens] >sp BAA88405 BAA88405 Glycogen-debranching enzyme (EC 2.4.1.25). Length = 1532	dbj BAA88405 .1	5809	405	1043	88	88	H2CBX36	pBluescript SK-
1533	876572			5810	2	202			HSAX43	Uni-ZAP XR
1534	876575	(AK002062) unnamed protein product [Homo sapiens] Length = 469	dbj BAA92064 .1	5811	1	780	35	49	HCRQ157	pSport1

1535	876576	homolog of Drosophila discs large protein, isoform 2 [Homo sapiens] >pir 38756 38756 homolog of Drosophila discs large protein, isoform 2 - human Length = 926	gb AAA50598.1	5812	61	1152	86	86	HCYBL73	pBluescript SK-
1536	876579	(AF132937) CGI-02 protein [Homo sapiens] >sp Q9Y2Z2 Q9Y2Z2 CGI-02 PROTEIN. Length = 618	gb AAD27712.1 AF1329	5813	320	1150	99	99	HHEGC16	pCMVSPORT 3.0
1537	876580			5814	190	297			H2CBG53	pBluescript SK-
1538	876581	AMP deaminase [Homo sapiens] >pir S68146 S68146 AMP deaminase (EC 3.5.4.6), erythrocyte, splice form 1a - human >sp AAB60408 AAB60408 AMP deaminase (EC 3.5.4.6) >dbj BAA02240.1  human erythrocyte-specific AMP deaminase [Homo sapiens] {SUB 10-776} >gb AAA5	gb AAB60408.1	5815	242	721	69	72	HCYBF23	pBluescript SK-
1539	876583			5816	723	935			HODCO80	Uni-ZAP XR
1540	876588			5817	302	370			HCYBG67	pBluescript SK-
1541	876589	(AF205889) Axin2 [Mus musculus] >sp AAF22800 AAF22800 Axin2. Length = 840	gb AAF22800.1 AF2058	5818	346	810	90	92	HCYBI10	pBluescript SK-
1542	876591	mitosin [Homo sapiens] >sp Q13246 Q13246 NUCLEAR PHOSPHOPROTEIN MITOSIN. Length = 3113	gb AAA82935.1	5819	2	952	90	90	H2CBE01	pBluescript SK-
1543	876592	glycine decarboxylase [Homo sapiens] >pir N0124 N0124 glycine decarboxylase (decarboxylating) (EC 1.4.4.2) - human >sp P23378 GCSP_HUMAN GLYCINE DEHYDROGENASE [DECARBOXYLATING], MITOCHONDRIAL PRECURSOR (EC 1.4.4.2) (GLYCINE DECARBOXYLASE) (GLYCINE CLEAV	gb AAA36478.1	5820	2	166	90	92	HCYBI92	pBluescript SK-
1544	876595			5821	98	307			HWMCC28	pSport1

1545	876596	(AF102542) beta-1,6-N-acetylglucosaminyltransferase [Homo sapiens] >gb AAD21525.1  (AF038650) core 2/core 4 beta-1,6-N-acetylglucosaminyltransferase; core 2/4-GnT [Homo sapiens] >sp O95395 O95395 BETA-1,6-N-ACETYLGUCOSAMINYLTRANSFERASE. Length = 438	gb AAD10824.1	5822	353	1747	100	100	HWMAN61	pSport1
1546	876597			5823	97	291			HCQCR04	Lambda ZAP II
1547	876600			5824	294	596			HWMFE48	pSport1
1548	876601			5825	999	1184			HMTBN44	pCMVSPORT 3.0
1549	876602			5826	2	457			HCRO104	pSport1
1550	876608	hepatitis C-associated microtubular aggregate protein p44 [Homo sapiens] >sp Q14496 Q14496 HEPATITIS C-ASSOCIATED MICROTUBULAR AGGREGATE PROTEIN P44. Length = 444	dbj BAA06043.1	5827	434	691	85	87	HTWCT64	pSport1
1551	876609	(AK000322) unnamed protein product [Homo sapiens] Length = 783	dbj BAA91085.1	5828	2	463	85	88	HETBI79	Uni-ZAP XR
1552	876610			5829	50	208			HWTBM65	Uni-ZAP XR
1553	876612			5830	536	760			HCQBN77	Lambda ZAP II
1554	876621	(AJ006068) dTDP-D-glucose 4,6-dehydratase [Homo sapiens] >gb AAD50061.1  (AF048686_1) (AF048686) dTDP-glucose 4,6-dehydratase like protein [Homo sapiens] >sp O95455 O95455 DTDP-D-GLUCOSE 4,6-DEHYDRATASE (EC 4.2.1.46). >sp AAD50061 AAD50061 DTDP-glucose 4,6-d	emb CAA0684.0.1	5831	105	1172	99	99	HKAED74	pCMVSPORT 2.0
1555	876622			5832	93	248			HCQAT20	Lambda ZAP II



1565	876648	(AJ009936) nuclear hormone receptor PRR1-A [Homo sapiens] >sp CAB55489 CAB55489 Nuclear hormone receptor PRR1-A. >emb CAB55491.1  (AJ009936) nuclear hormone receptor PRR1-B [Homo sapiens] {SUB 56-434} Length = 434	emb CAB55489.1	5842	3	290	100	100	HCQAG09	Lambda ZAP II
1566	876649	cyclin F [Homo sapiens] >sp P41002 CG2F_HUMAN G2/MITOTIC-SPECIFIC CYCLIN F. Length = 786	gb AAB60342.1	5843	2	475	79	79	HCROT53	pSport1
1567	876652	(AF039023) Ran-GTP binding protein; RanBP6 [Homo sapiens] >sp O60518 O60518 RAN-GTP BINDING PROTEIN (FRAGMENT). Length = 1105	gb AAC14260.1	5844	3	215	71	74	HOENX50	Uni-ZAP XR
1568	876656	(AC005531) similar to lymphocyte early activation antigen AIM/CD69; similar to Q07108 (PID:g584906) [Homo sapiens] >sp O95043 O95043 WUGSC:H_DJ0701016.2 PROTEIN. Length = 189	gb AAD04729.1	5845	2	412	100	100	HCEOW20	Uni-ZAP XR
1569	876657			5846	2	391			HCRMG16	pSport1
1570	876660			5847	1	420			HCEPH79	Uni-ZAP XR
1571	876666	(AF061795) dynamin-like protein Dymple isoform [Homo sapiens] >sp O60709 O60709 DYNAMIN-LIKE PROTEIN DYMPLE ISOFORM. >gb AAD22412.1  (AF107048) dynamin-like protein variant 4 [Rattus norvegicus] {SUB 448-699} Length = 699	gb AAC35283.1	5848	73	654	76	77	HFOYY56	pSport1
1572	876668			5849	555	779			HSXDG80	Uni-ZAP XR
1573	876675	(AK000294) unnamed protein product [Homo sapiens] Length = 929	db BAA91062.1	5850	2	724	94	94	HHEUK77	pCMVSPORT 3.0

1574	876677	protein serine/threonine kinase [Homo sapiens] >emb CAA54508.1 Cdk-activating kinase [Homo sapiens] >emb CAA55785.1 MO15/CDK-activating kinase (CAK) [Homo sapiens] >emb CAA54793.1 CDK activating kinase [Homo sapiens] >pir A54820 A54820 CDK-activating p	gb AAA36657.1	5851	23	802	100	100	HHED014	pCMVSPORT 3.0
1575	876680			5852	96	377			HKIMC75	Lambda ZAP II
1576	876683			5853	466	732			HWMBI36	pSport1
1577	876685	myosin-I, Myr 1b (alternatively spliced) - rat Length = 1107	pir C45439 C45439	5854	3	1634	91	93	HE8TM64	Uni-ZAP XR
1578	876687			5855	31	291			HKLSA57	pBluescript
1579	876689	(AF127577) nuclear factor RIP140 [Homo sapiens] Length = 1158	gb AAF35255.1 AF1275	5856	2	1801	91	92	HOGCV45	pCMVSPORT 2.0
1580	876690	(AF127577) nuclear factor RIP140 [Homo sapiens] Length = 1158	gb AAF35255.1 AF1275	5857	34	957	97	97	HADCX04	pSport1
1581	876693	integrin alpha6 subunit [Homo sapiens] >gb AAB24829.1 integrin subunit alpha 6 [human, Peptide Partial, 102 aa] [Homo sapiens] (SUB 703-804) Length = 1067	emb CAA4209.9.1	5858	2	1660	96	96	HCRPH70	pSport1
1582	876696	hepatocyte nuclear factor-3/fork head homolog 11B [Homo sapiens] Length = 748	gb AAC51129.1	5859	3	332	75	76	HCRQM22	pSport1
1583	876697	PDGF associated protein [Homo sapiens] >gb AAF03506.1 AC004922.3 (AC004922) PDGF associated protein [Homo sapiens] >sp Q13442 HP28_HUMAN 28 KD HEAT- AND ACID-STABLE PHOSPHOPROTEIN (HASPP28) (PDGF ASSOCIATED PROTEIN). >sp AAF03506 AAF03506 PDGF associated	gb AAC50462.1	5860	2	595	61	61	HKAEB15	pCMVSPORT 2.0
1584	876701			5861	165	353			HSYAP76	pCMVSPORT 3.0

1585	876716	(AB002357) KIAA0359 [Homo sapiens] >sp O15066 KF3B_HUMAN KINESIN-LIKE PROTEIN KIF3B (MICROTUBULE PLUS END- DIRECTED KINESIN MOTOR 3B) (KIAA0359) (HH0048). Length = 747	dbj BAA20815 .1	5862	3	689	100	100	HCRMV17	pSport1
1586	876719	(AB003103) 26S proteasome subunit p55 [Homo sapiens] >pir PC6501 JC6523 26s proteasom p55 protein - human >sp O00232 O00232 PROTEASOME SUBUNIT P55. Length = 456	dbj BAA19749 .1	5863	554	1447	100	100	HOEKC59	Uni-ZAP XR
1587	876722	(AB001075) galectin-2 related protein [Rattus norvegicus] >sp Q9Z144 Q9Z144 GALECTIN-2 RELATED PROTEIN. Length = 130	dbj BAA74954 .1	5864	1	306	78	92	HKCSL28	pBluescript
1588	876725	(AL031668) dJ64K7.2 (eukaryotic translation initiation factor 2, subunit 2 (beta, 38kD )) [Homo sapiens] >sp CAB43741 CAB43741 DJ64K7.2 (eukaryotic translation initiation factor 2, subunit 2 (beta, 38kD )). Length = 333	emb CAB4374 1.1	5865	120	1154	88	88	HHEFB46	pCMVSPORT 3.0
1589	876726	(AL133620) hypothetical protein [Homo sapiens] >emb CAB63746.1 (AL133620) hypothetical protein [Homo sapiens] >sp CAB63746 CAB63746 Hypothetical 115.3 kd protein. Length = 1031	emb CAB6374 6.1	5866	233	814	35	53	HWBBS84	pCMVSPORT 3.0
1590	876728	epiligrin alpha 3 subunit [Homo sapiens] >pir A55347 A55347 adhesive ligand epiligrin, alpha-3 chain form A precursor - human >sp Q16787 LMA3_HUMAN LAMININ ALPHA-3 CHAIN PRECURSOR (EPILIGRIN 170 KD SUBUNIT) (E170). Length = 1713	gb AAA59483 1	5867	1	1407	92	92	HSIFZ22	Uni-ZAP XR
1591	876731			5868	1	249			HCRNB80	pSport1
1592	876732			5869	234	584			HTPAY47	Uni-ZAP XR
1593	876743			5870	120	629			H2LBA37	pBluescript SK-
1594	876744			5871	90	608			HWLIP86	pSport1



1595	876745	retinoic acid receptor beta-2 - human >sp P10826 RRB2_HUMAN RETINOIC ACID RECEPTOR BETA-2 (RAR-BETA-2) (RAR-EPSILON). >gb AAD45688.1 AF157483.1 (AF157483) retinoic acid receptor beta 4 [Homo sapiens] {SUB 113-448} Length = 448	pir S02827 S02827	5872	35	430	100	100	HGBAM79	Uni-ZAP XR
1596	876747	amphiregulin [Homo sapiens] >gb AAA51781.1  amphiregulin [Homo sapiens] >pir A34702 A34702 amphiregulin precursor - human >sp P15514 AMPR_HUMAN AMPHIREGULIN PRECURSOR (AR) (COLORECTUM CELL-DERIVED GROWTH FACTOR) (CRDGF). >gb AAA72989.1 synthetic amphireg	gb AAA51773.1	5873	1	978	67	67	HKAFU85	pCMV Sport 2.0
1597	876750			5874	1	174			HNFE067	Uni-ZAP XR
1598	876752	pS2 precursor [Homo sapiens] >emb CAA28695.1  pS2 [Homo sapiens] >emb CAA36254.1  pS2 protein [Homo sapiens] >pir A26667 A26667 pS2 protein precursor - human >sp P04155 PS2_HUMAN PS2 PROTEIN PRECURSOR (HPI.A) (BREAST CANCER ESTROGEN-INDUCIBLE PROTEIN) (PN)	emb CAA2515.1	5875	3	281	100	100	H2MBA27	pBluescript SK-
1599	876753			5876	2	166			HWLMB30	pSport1
1600	876760	splicing factor [Homo sapiens] >sp Q14499 Q14499 SPLICING FACTOR. Length = 530	gb AAA16347.1	5877	2	643	75	75	HHEBN60	pCMV Sport 3.0
1601	876762			5878	989	1261			HOEMQ68	Uni-ZAP XR
1602	876764			5879	110	265			HHFCP36	Uni-ZAP XR
1603	876767	cell cycle protein p38-2G4 homolog [Homo sapiens] >sp O43846 O43846 CELL CYCLE PROTEIN P38-2G4 HOMOLOG. Length = 394	gb AAB91536.1	5880	743	871	94	97	HTXKH86	Uni-ZAP XR

1604	876771	ORF [Homo sapiens] >sp P51809 SYBL_HUMAN SYNAPTOBREVIN-LIKE PROTEIN 1. Length = 220	emb CAA6313.3.1	5881	1	393	88	88	HISCI72	pSport1
1605	876773	DDBb p48 [Homo sapiens] >sp Q92466 Q92466 DDBB P48. Length = 427	gb AAB07897.1	5882	2	679	99	99	HJACJ75	pBluescript SK-
1606	876776	(AJ006487) propionyl-CoA carboxylase [Homo sapiens] >sp CAA07066 CAA07066 Propionyl-CoA carboxylase. >gb AAA60037.1  exon [Homo sapiens] {SUB 401-433} Length = 539	emb CAA07066.6.1	5883	54	1505	99	99	HTEDS58	Uni-ZAP XR
1607	876789	(AK001492) unnamed protein product [Homo sapiens] Length = 706	dbj BAA91721.1	5884	177	1208	95	95	HUVHP60	Uni-ZAP XR
1608	876791	nonspecific crossreacting antigen precursor [Homo sapiens] >pir A26902 A27681 nonspecific cross-reacting antigen precursor - human >sp Q13774 Q13774 NONSPECIFIC CROSSREACTING ANTIGEN PRECURSOR. Length = 344	gb AAA51739.1	5885	46	1140	95	95	HUFCI29	pSport1
1609	876795			5886	2	280			HCRNO02	pSport1
1610	876798	(AF144756) adipocyte lipid-binding protein [Rattus norvegicus] >sp AAD37371 AAD37371 Adipocyte lipid-binding protein. Length = 150	gb AAD37371.1 AF1447	5887	145	390	85	88	HAUAF56	Uni-ZAP XR
1611	876802			5888	628	933			HHEUM25	pCMVSPORT 3.0
1612	876804			5889	306	458			HWLQW08	pSport1
1613	876807	(AF105036) zinc finger transcription factor GKLF [Homo sapiens] >sp AAD42165 AAD42165 Zinc finger transcription factor GKLF. Length = 470	gb AAD42165.1 AF1050	5890	1	717	93	93	HOEOP07	Uni-ZAP XR
1614	876809	mucin 2 precursor, intestinal - human (fragments) >gb AA59163.1  mucin [Homo sapiens] {SUB 626-1895} >gb AA59164.1  MUC2 [Homo sapiens] {SUB 2037-3020} >gb AA36334.1  intestinal mucin [Homo sapiens] {SUB 1916-2193} >gb AA59861.1  mucin-like protein [H	pir A49963 A43932	5891	2	808	100	100	HCQAE79	Lambda ZAP II

1615	876811	(AF034745) LNXp80 [Mus musculus] >pir T09457 T09457 numb-binding protein LNXp80 - mouse >sp O70263 O70263 LIGAND OF NUMB- PROTEIN X (LNXp80). Length = 728	gb AAC40075. 11	5892	1	681	87	93	HCQDR53	Lambda ZAP II
1616	876816			5893	209	472			HOEFO36	Uni-ZAP XR
1617	876817	thrombospondin 2 [Homo sapiens] >pir A47379 TSHUP2 thrombospondin 2 precursor - human >sp P35442 TSP2_HUMAN THROMBOSPONDIN 2 PRECURSOR. Length = 1172	gb AAA03703. 11	5894	26	1738	86	86	HFIAL22	pSport1
1618	876822			5895	607	783			HWLMN85	pSport1
1619	876823	(AL122042) hypothetical protein [Homo sapiens] >pir T34520 T34520 hypothetical protein DKFZp564J157.1 - human (fragment) >sp CAB59179 CAB59179 Hypothetical 17.9 kd protein (fragment). >emb CAB59179.2  (AL122042) hypothetical protein [Homo sapiens] {SUB 22	emb CAB5917 9.11	5896	2	529	100	100	HCGLC91	pCMVSPORT 2.0
1620	876829	(AL034423) dJ1185N5.1 (similar to C.elegans Y53C10A.5 protein) [Homo sapiens] Length = 270	emb CAB7686 4.11	5897	722	1336	97	97	HMHBJ66	Uni-ZAP XR
1621	876830	dopa decarboxylase [Homo sapiens] >gb AA58437.1  aromatic amino acid decarboxylase [Homo sapiens] >pir A33663 DCHUA aromatic-L-amino-acid decarboxylase (EC 4.1.1.28) - human >sp P20711 DCD_HUMAN AROMATIC- L-AMINO-ACID DECARBOXYLASE (EC 4.1.1.28) (DOPA DEC	gb AAA20894. 11	5898	1	288	92	93	HCQDG08	Lambda ZAP II
1622	876831	nidogen [Homo sapiens] Length = 1246	emb CAA5770 9.11	5899	3	296	96	98	HE8BX38	Uni-ZAP XR
1623	876836	PIG-B [Homo sapiens] >pir S71751 S71751 probable GPI mannosyl transferase PIG-B - human >sp Q92521 Q92521 PIG-B. Length = 554	dbj BAA07709 4.11	5900	1194	1051	100	100	HMVCR68	pSport1



1634	876882	hnRNP B1 protein [Homo sapiens] >gb AA60271.1  hnRNP B1 protein [Homo sapiens] >pir A56845 B34504 heterogeneous nuclear ribonucleoprotein B1 - human >sp P22626 ROA2_HUMAN HETEROGENEOUS NUCLEAR RIBONUCLEOPROTEINS A2/B1 (HNRP A2 AND HNRP B1). >gb AAD4973 (AB032950) KIAA1124 protein [Homo sapiens] >sp BAA86438 BAA86438 KIAA1124 protein (fragment). Length = 1323 putative [Mus musculus] >pir S15785 S15785 heat-stable antigen-related hypothetical protein HSA-C-mouse >sp Q61692 Q61692 PUTATIVE HEAT STABLE ANTIGEN. Length = 141	dbj BAA06031.1	5911	1	636	100	100	100	HKGBE11	pSport1
1635	876886		dbj BAA86438.1	5912	437	1591	86	90		HRAEG13	pCMV Sport 3.0
1636	876888		emb CAA3984.3.1	5913	384	500	36	43		HLIBZ07	pCMV Sport 1
1637	876890	DNase protein [Homo sapiens] >gb AAB17022.1  XIB [Homo sapiens] >pir JC4633 JC4633 DNase I-like endonuclease (EC 3.1.1.-) - human >sp P49184 DRNL_HUMAN MUSCLE-SPECIFIC DNASE I-LIKE PRECURSOR (EC 3.1.21.-) (DNASE X) (XIB). Length = 302	emb CAA6203.7.1	5914	169	1131	94	94		HTPEB46	Uni-ZAP XR
1638	876892	!!!! ALU SUBFAMILY SQ WARNING ENTRY !!!! Length = 593	sp P39194 ALU7_HUMAN	5915	5	118	72	76		HDPSS23	pCMV Sport 3.0
1639	876901			5916	1	1077				HCEIC29	Uni-ZAP XR
1640	876903			5917	520	765				HE9OY91	Uni-ZAP XR
1641	876904			5918	354	686				HFKFN66	Uni-ZAP XR
1642	876905	(AF078859) PTD004 [Homo sapiens] >sp Q9Y6G4 Q9Y6G4 PTD004. Length = 396	gb AAD44491.1	5919	2	1324	100	100		HWMFQ16	pSport1

1643	876909	membrane protein [Homo sapiens] >emb CAA42708.1  MRP-1 (motility related protein) [Homo sapiens] >gb AAA80320.1  CD9 antigen [Homo sapiens] >gb AAC60586.1  CD9 antigen [human, leukocytes, Peptide, 228 aa] [Homo sapiens] >pir A46123 A40402 CD9 antigen - hu	gb AAA59982.1	5920	41	865	88	88	HCRBB01	Uni-ZAP XR
1644	876912			5921	281	625			HSAAN15	pBluescript SK-
1645	876913	CYCLIN-DEPENDENT KINASE (CDK)8 [unidentified] >emb CAAS9754.1  CDK8 protein kinase [Homo sapiens] >pir I37227 I37227 cyclin- dependent kinase 8 - human >sp P49336 CDK8 HUMAN CELL DIVISION PROTEIN KINASE 8 (EC 2.7.1.-) (PROTEIN KINASE K35). Length = 464	emb CAA03585.1	5922	134	1006	89	89	HTEKS27	Uni-ZAP XR
1646	876920	mel-13a protein - mouse Length = 132	pir S65785 S65785	5923	231	530	70	75	HWMB10	pSportI
1647	876921	(AF108460) ubinuclein [Homo sapiens] >gb AAF31756.1 AF108461_1 (AF108461) ubinuclein [Homo sapiens] >gb AAA64188.1  VT4 [Homo sapiens] {SUB 348-691  Length = 1134	gb AAF31755.1 AF1084	5924	1	723	73	86	HCQBO58	Lambda ZAP II
1648	876923	11-beta-hydroxysteroid dehydrogenase type 2 [Homo sapiens] >pir S62789 S62789 11beta-hydroxysteroid dehydrogenase (EC 1.1.1.146) type 2 - human Length = 405	gb AAC50356.1	5925	2	991	83	83	HWLGQ64	pSportI
1649	876926			5926	309	572			HCQCV14	Lambda ZAP II
1650	876934			5927	8	127			HCROO59	pSportI
1651	876936			5928	632	970			HCRPN27	pSportI
1652	876938			5929	357	512			HCRON34	pSportI

1653	876940	heparin-binding EGF-like growth factor [Homo sapiens] >gb AAC15470.1  (AC004634) HBGF [Homo sapiens] >pir A38432 A38432 heparin-binding EGF-like growth factor precursor - human >sp Q99075 HBGF_HUMAN HEPARIN-BINDING EGF-LIKE GROWTH FACTOR PRECURSOR (HB-EGF)	gb AAA39556.1	5930	2	268	81	83	HFKFH50	Uni-ZAP XR
1654	876941			5931	2	256			HCRQG66	pSport1
1655	876942	(AF149770) sentrin/SUMO-specific protease [Homo sapiens] Length = 643	gb AAF31171.1 AF1497	5932	327	791	100	100	HCROW80	pSport1
1656	876943	glutathione peroxidase-G1 [Homo sapiens] Length = 190	emb CAA48394.1	5933	228	677	99	99	HLQER45	Lambda ZAP II
1657	876944			5934	18	218			HWADQ26	pCMVSPORT 3.0
1658	876945			5935	2	322			HLJB74	pCMVSPORT 1
1659	876946	(AF161479) HSPC130 [Homo sapiens] >sp AAF29094 AAF29094 HSPC130. Length = 473	gb AAF29094.1 AF1614	5936	486	860	91	93	HE8TT24	Uni-ZAP XR
1660	876947	aminoacylase-1 [Homo sapiens] >dbj BAA03814.1  45kDa protein [Homo sapiens] >dbj BAA03397.1  aminoacylase-1 [Homo sapiens] >pir A47488 A47488 aminoacylase (EC 3.5.1.14) - human >sp Q03154 ACY1_HUMAN AMINOACYLASE-1 (EC 3.5.1.14) (N-ACYL-L-AMINO-ACID AMIDOH	gb AAA02852.1	5937	28	696	96	98	HSSJS63	Uni-ZAP XR
1661	876949			5938	250	507			H2CAA03	pBluescript SK-
1662	876952			5939	141	530			HCROI77	pSport1
1663	876953	(AB011148) KIAA0576 protein [Homo sapiens] >pir T00341 T00341 hypothetical protein KIAA0576 -human (fragment) >sp Q9Y4E5 Q9Y4E5 KIAA0576 PROTEIN (FRAGMENT). Length = 1075	dbj BAA25502.1	5940	1	444	100	100	H2CBW39	pBluescript SK-

1664	876954	translational initiation factor eIF-2, alpha subunit [Homo sapiens] >sp P05198 IF2A_HUMAN EUKARYOTIC TRANSLATION INITIATION FACTOR 2 ALPHA SUBUNIT (EIF-2- ALPHA). {SUB 2-315} Length = 315	gb AAA52373.1	5941	3	806	100	100	HHBHM68	pCMVSport1
1665	876957	(AB024436) beta-1,4-galactosyltransferase IV [Homo sapiens] >gb AAC39735.1 (AF038662) beta-1,4-galactosyltransferase [Homo sapiens] >gb AAC72493.1 (AF022367) beta-1,4-galactosyltransferase [Homo sapiens] >sp O60513 O60513 BETA-1,4-GALACTOSYLTRANSFERASE.	dbj BAA75821.1	5942	605	1351	93	93	HSYBF36	pCMVSport3.0
1666	876958			5943	221	147			HWMCE91	pSport1
1667	876959			5944	70	279			HUVFJ36	Uni-ZAP XR
1668	876961	TRANSCRIPTION FACTOR IIIA (FACTOR A) (TFIIIA). Length = 423	sp Q92664 TF3A_HUMAN	5945	3	1229	85	86	HLYBU84	pSport1
1669	876963			5946	153	404			HWLMK65	pSport1
1670	876964	(AF114264) [Homo sapiens] >sp Q9Y2V1 Q9Y2V1 HYPOTHETICAL 53.6 KD PROTEIN. Length = 448	gb AAD29607.1 AF1142	5947	18	881	75	76	HWLPY93	pSport1
1671	876965			5948	1	294			HWMBV37	pSport1
1672	876966	(AF166331) beta crystallin A2 [Homo sapiens] >sp Q9Y562 Q9Y562 BETA CRYSTALLIN A2. >emb CAA60148.1 beta A2 crystallin [Homo sapiens] {SUB 158-185} Length = 197	gb AAD45388.1 AF1663	5949	338	751	87	87	HCDME16	pSport1
1673	876967	(AB014536) KIAA0636 protein [Homo sapiens] >gb AAD46074.2 (AF077226) copine III [Homo sapiens] >sp O75131 O75131 KIAA0636 PROTEIN. >sp AAD46074 AAD46074 Copine III. Length = 537	dbj BAA31611.1	5950	3	590	53	71	HCRQM25	pSport1
1674	876968			5951	57	428			HWMBV72	pSport1



1675	876969				5952	31	417			HCRQK24	pSport1
1676	876971				5953	293	829			HWLOK80	pSport1
1677	876975	cDNA EST EMBL:D75703 comes from this gene; cDNA EST yk513g5.3 comes from this gene; cDNA EST yk528b10.3 comes from this gene [Caenorhabditis elegans] >pir T27134 T27134 hypothetical protein Y53C12B.2 - Caenorhabditis elegans >sp O18216 O18216 Y53C12B.2 PR	emb CAB1649 1.1		5954	2	820	66	84	HNTBD04	pCMVSPORT 3.0
1678	876976	(AJ001306) PDZ domain protein [Homo sapiens] >sp O15249 O15249 PDZ DOMAIN PROTEIN. Length = 1524	emb CAA0466 6.1		5955	194	469	68	72	HWLUV59	pSport1
1679	876977	(AF125335) pp21 homolog [Homo sapiens] >sp AAFI17229 AAFI17229 Pp21 homolog. Length = 104	gb AAFI17229. 1 AF1255		5956	1	609	100	100	HSUSF13	pBluescript
1680	876978				5957	243	473			H2CBE41	pBluescript SK-
1681	876980				5958	516	611			HWLFY03	pSport1
1682	876981				5959	3	170			HE2IX48	Uni-ZAP XR
1683	876983				5960	216	461			HNFDH27	Uni-ZAP XR
1684	876984				5961	109	339			HWLXS11	pSport1
1685	876985	(AF095791) TACC2 protein [Homo sapiens] >sp O95359 O95359 TACC2 PROTEIN (FRAGMENT). Length = 653	gb AAC64968. 1		5962	1	510	90	90	HCRPG94	pSport1
1686	876987	IMP dehydrogenase (EC 1.1.1.205) I - human >sp P20839 IMD1_HUMAN INOSINE-5'- MONOPHOSPHATE DEHYDROGENASE 1 (EC 1.1.1.205) (IMP DEHYDROGENASE 1) (IMPDH-1) (IMPD 1). Length = 514	pir A35566 A3 5566		5963	2	166	100	100	HCUGO73	ZAP Express
1687	876989	KIAA0036 [Homo sapiens] >sp Q15051 Y036_HUMAN HYPOTHETICAL PROTEIN KIAA0036. Length = 598	dbj BAA04968 1		5964	97	1575	83	85	HPMDD49	Uni-ZAP XR
1688	876990				5965	142	282			HCNSF23	pBluescript

1689	876991				5966	146	340			HKDBC15	pCMVSport I
1690	876992				5967	602	802			HSIGM23	Uni-ZAP XR
1691	876993				5968	498	869			HCQBN43	Lambda ZAP II
1692	876994				5969	306	566			HCQBO03	Lambda ZAP II
1693	876997				5970	335	505			HCQCF85	Lambda ZAP II
1694	876998	(AB020669) KIAA0862 protein [Homo sapiens] >sp BAA74885 BAA74885 KIAA0862 protein. Length = 582	dbj BAA74885 .1	5971	291	842	86	88	HUVFS16	Uni-ZAP XR	
1695	877000	reading frame (gag?) [Spleen necrosis virus] >pir A93904 FOVDA gag polyprotein - avian spleen necrosis virus (fragment) >sp P03342 GAG_AVISN GAG POLYPROTEIN [CONTAINS: CORE PROTEIN P15; INNER COAT PROTEIN P12; CORE SHELL PROTEIN P30] (FRAGMENT). Length =	emb CAA2451 3.1	5972	229	402	50	60	HCQBD51	Lambda ZAP II	
1696	877001	!!!! ALU SUBFAMILY SQ WARNING ENTRY !!!! Length = 593	sp P39194 AL U7_HUMAN	5973	39	143	74	81	HCRMU18	pSportI	
1697	877002			5974	1	258			HONAN63	pBluescript SK-	
1698	877004			5975	332	490			HCQCU65	Lambda ZAP II	
1699	877005			5976	107	187			HCRNO79	pSportI	
1700	877006			5977	364	636			HCRM022	pSportI	
1701	877007	(AB014603) KIAA0703 protein [Homo sapiens] >sp O75185 O75185 KIAA0703 PROTEIN. Length = 963	dbj BAA31678 .1	5978	2	673	82	82	HFDME46	pSportI	
1702	877008			5979	79	543			HCWHN82	ZAP Express	

1703	877009	(AF155101) putative kruppel-related zinc finger protein NY-REN-23 antigen [Homo sapiens] >sp Q9Y5A5 Q9Y5A5 PUTATIVE KRUPPEL-RELATED ZINC FINGER PROTEIN NY-REN-23 ANTIGEN (FRAGMENT). Length = 547	gb AAD42867.1 AF1551	5980	2	271	88	89	HHPEK59	Uni-ZAP XR
1704	877010	(AF105020) putative protein O-mannosyltransferase [Homo sapiens] >sp AAF14118 AAF14118 Hypothetical 84.2 kd protein. Length = 750	gb AAF14118.1 AF1050	5981	199	360	100	100	HKCTB07	pBluescript
1705	877011			5982	38	325			HFPIZ22	Uni-ZAP XR
1706	877012			5983	494	727			HE8FB89	Uni-ZAP XR
1707	877013			5984	44	304			HCRND67	pSport1
1708	877014	(AF027571) phospholipase C-beta 4 isoform [Rattus norvegicus] >sp O88356 O88356 PHOSPHOLIPASE C-BETA 4 ISOFORM (FRAGMENT). Length = 747	gb AAC24984.1	5985	1	303	100	100	HSPA101	pSport1
1709	877015	(AK000512) unnamed protein product [Homo sapiens] Length = 335	dbj BAA91218.1	5986	3	650	100	100	HOSXA83	pBluescript
1710	877018			5987	576	776			HAVTF85	Other
1711	877019			5988	81	566			HTEPJ45	Uni-ZAP XR
1712	877020			5989	262	522			HOSBX95	Uni-ZAP XR
1713	877022			5990	54	266			HSIFP30	Uni-ZAP XR
1714	877023	cytochrome P450 PCN3 [Homo sapiens] >pir A34101 A34101 cytochrome P450 3A5 - human >sp P20815 CP35_HUMAN CYTOCHROME P450 3A5 (EC 1.14.14.1) (CYP11A5) (P450-PCN3). >gb AAB00083.1  cytochrome P450 [Homo sapiens] {SUB 1-24} Length = 502	gb AAA02993.1	5991	259	909	81	85	HE9HL05	Uni-ZAP XR
1715	877024			5992	86	316			HWLMB91	pSport1



1734	877057	(AL049670) hypothetical protein [Homo sapiens] >emb CAA16171.1 (AL021397) dJ69E11.3 (Yeast YPR037W and worm C02C2.6 predicted proteins LIKE) [Homo sapiens] >sp O75663 O75663 DJ69E11.3 (YEAST YPR037W AND WORM C02C2.6 PREDICTED PROTEINS LIKE). Length = 272	emb CAB4124 4.1	6011	1	237	73	75	HCRPD33	pSport1
1735	877058			6012	103	345			HCRPE57	pSport1
1736	877059	Eps8 [Mus musculus] >pir S39983 S39983 eps8 protein - mouse >sp Q08509 EPS8_MOUSE EPIDERMAL GROWTH FACTOR RECEPTOR KINASE SUBSTRATE EPS8. Length = 821	gb AAA16358. 1	6013	2	337	38	54	HCRNJ46	pSport1
1737	877063			6014	141	425			HWLRC59	pSport1
1738	877065			6015	1	87			HLHCD08	Uni-ZAP XR
1739	877066			6016	136	294			HWLVE77	pSport1
1740	877067			6017	9	95			HCROJ64	pSport1
1741	877068			6018	251	484			HWLQM05	pSport1
1742	877069			6019	191	367			HCRPW24	pSport1
1743	877070			6020	186	371			HOCTA26	pSport1
1744	877071			6021	2	649			HBKDB96	pSport1
1745	877073			6022	7	135			HCRPE30	pSport1
1746	877075	beta-galactosidase alpha peptide [Cloning vector pSport1] >sp Q46478 Q46478 BETA- GALACTOSIDASE ALPHA PEPTIDE (FRAGMENT). Length = 113	gb AAA73456. 2	6023	1	165	100	100	HKGAW02	pSport1
1747	877079			6024	2	250			HCQCD93	Lambda ZAP II
1748	877080			6025	2	193			HOCTD62	pSport1
1749	877083			6026	506	832			HE8PC46	Uni-ZAP XR
1750	877087			6027	3	440			HWLQM53	pSport1
1751	877088			6028	105	770			HTLGE26	Uni-ZAP XR

1752	877092					6029	159	305				HCDFE85	pSport1
1753	877093					6030	3	221				HFEAH85	Uni-ZAP XR
1754	877094					6031	2	166				HE8QT45	Uni-ZAP XR
1755	877095	similar to beta-transducin [Caenorhabditis elegans] >pir T16607 T16607 hypothetical protein K10B2.1 - Caenorhabditis elegans >sp Q09990 YSS1_CAEEL HYPOTHETICAL 80.3 KD TRP-ASP REPEATS CONTAINING PROTEIN K10B2.1 IN CHROMOSOME II. Length = 701	gb AAA68258.1			6032	2	442	33	56		HWLQL84	pSport1
1756	877096					6033	1	210				HCQCP82	Lambda ZAP II
1757	877097	(AC009991) protein [Arabidopsis thaliana] >sp AAF01517 AAF01517 F9F8.14 protein. Length = 701	gb AAF01517.1 AC0099			6034	3	488	39	64		HCRMW80	pSport1
1758	877098					6035	279	470				HSIGL73	Uni-ZAP XR
1759	877099					6036	338	592				HHEYT40	pCMVSPORT 3.0
1760	877101	(AK001798) unnamed protein product [Homo sapiens] Length = 298	db BAA91918.1			6037	527	1168	73	73		HDQHQ51	pCMVSPORT 3.0
1761	877104					6038	386	580				HODGR31	Uni-ZAP XR
1762	877105					6039	139	303				HWLWB92	pSport1
1763	877106					6040	74	235				HWLRD79	pSport1
1764	877110					6041	56	286				HWLOW72	pSport1
1765	877111					6042	112	765				HUSGT72	pSport1
1766	877112	(AF172328) [Homo sapiens] >sp AAD52585 AAD52585 Hypothetical 10.2 kd protein. Length = 95	gb AAD52585.1 AF1723			6043	136	453	96	96		HPWBM91	Uni-ZAP XR
1767	877114					6044	173	373				HWLVB03	pSport1
1768	877119					6045	218	451				HAJAM74	pCMVSPORT 3.0
1769	877120					6046	1	486				HMMME78	pSport1

1770	877121				6047	145	2			HCYB73	pBluescript SK-
1771	877122				6048	244	465			HCRNE77	pSport1
1772	877123				6049	201	335			HWMBC94	pSport1
1773	877126				6050	601	786			HWLMS73	pSport1
1774	877129				6051	486	662			HFAMB70	Uni-ZAP XR
1775	877130				6052	139	291			HCQAK62	Lambda ZAP II
1776	877131				6053	11	277			HCQDP71	Lambda ZAP II
1777	877132				6054	1238	1513			HE9PB28	Uni-ZAP XR
1778	877133				6055	155	298			HCQCR68	Lambda ZAP II
1779	877134	sodium-D-glucose cotransporter [Homo sapiens] >sp Q92681 Q92681 SODIUM-D-GLUCOSE COTRANSPORTER. Length = 617	emb CAA5805.8.1		6056	3	167	96	98	HEPNB10	pSport1
1780	877135	!!! ALU SUBFAMILY SQ WARNING ENTRY !!!! Length = 593	sp P39194 ALU7_HUMAN		6057	71	238	73	78	HWLNY36	pSport1
1781	877137	(AF132021) myosin X [Homo sapiens] >gb AAFI7363.1 AF184153_1 (AF184153) myosin X [Homo sapiens] {SUB 347-495} Length = 1540	gb AAFI7363.1 AF184153_1 AF1320		6058	210	548	100	100	HWLRC68	pSport1
1782	877138				6059	178	309			HWLQM88	pSport1
1783	877139				6060	296	472			HWLMG40	pSport1
1784	877140				6061	1	153			HWLQO15	pSport1
1785	877142	IDN4-GGTR14 PROTEIN. >dbj BAA77334.1  (AB019493) IDN4-GGTR9 [Homo sapiens] {SUB 57-414} >emb CAA22908.1 (AL035303) hypothetical protein [Homo sapiens] {SUB 159-414} Length = 414	sp Q9Y6Y5 Q9Y6Y5		6062	2	220	84	86	H2CAC59	pBluescript SK-
1786	877143				6063	257	433			HWLXJ87	pSport1
1787	877145				6064	250	447			HSDSJ26	pBluescript
1788	877146				6065	413	550			HCFCR55	pSport1

1789	877147	cDNA EST yk321h8.5 comes from this gene; cDNA EST EMBL:D68896 comes from this gene; cDNA EST yk395f9.5 comes from this gene; cDNA EST yk360f1.2.5 comes from this gene [Caenorhabditis elegans] >emb CAA21522.1 (AL032624) cDNA EST yk321h8.5 comes from this g	emb CAA90338.1	6066	2	409	41	68	HCRNP62	pSport1
1790	877148			6067	97	318			HCRM04	pSport1
1791	877149			6068	453	710			HGBHE60	Uni-ZAP XR
1792	877153			6069	18	263			HKAOG63	pCMVSPORT 2.0
1793	877154			6070	382	531			H2CBR38	pBluescript SK-
1794	877155			6071	2	154			HRDEW54	Uni-ZAP XR
1795	877157			6072	64	219			HBMDC60	pBluescript
1796	877163			6073	407	712			HOGDM40	pCMVSPORT 2.0
1797	877165			6074	197	307			HWLN61	pSport1
1798	877166			6075	549	439			HCQCT53	Lambda ZAP II
1799	877167	(AK002071) unnamed protein product [Homo sapiens] Length = 528	dbj BAA92068.1	6076	1	219	82	92	HCRNV59	pSport1
1800	877168			6077	216	362			HCQDP52	Lambda ZAP II
1801	877169			6078	581	694			HFAAH06	Uni-ZAP XR
1802	877170	(AF155106) NY-REN-36 antigen [Homo sapiens] >sp Q9Y5A1 Q9Y5A1 NY-REN-36 ANTIGEN (FRAGMENT). Length = 227	gb AAD42872.1 AF1551	6079	1	909	60	60	HWLWX02	pSport1
1803	877171			6080	286	468			HCYBH52	pBluescript SK-



1804	877173	(AB018122) FGF-19 [Homo sapiens] >gb AAD45973.1 AF110400_1 (AF110400) fibroblast growth factor 19 [Homo sapiens] >sp O95750 O95750 FGF-19. >sp AAD45973 AAD45973 Fibroblast growth factor 19. Length = 216	dbj BAA75500 .1	6081	1	231	78	78	HCRNX51	pSport1
1805	877174			6082	279	148			HHEPP92	pCMVSPORT 3.0
1806	877175			6083	3	158			HCQAB45	Lambda ZAP II
1807	877176			6084	48	281			HCYBG53	pBluescript SK-
1808	877181			6085	183	383			HCQDF43	Lambda ZAP II
1809	877184			6086	674	856			HSHBU44	Uni-ZAP XR
1810	877185			6087	13	162			HLHSE50	pBluescript
1811	877187	(AB008164) ST1C2 [Homo sapiens] >gb AAC51285.1  sulfotransferase [Homo sapiens] >gb AAC00409.1  (AF026303) sulfotransferase [Homo sapiens] >sp O00338 O00338 SULFOTRANSFERASE. Length = 296	dbj BAA28346 .1	6088	1	423	97	100	HOSDV69	Uni-ZAP XR
1812	877189			6089	202	396			HCRMH42	pSport1
1813	877191			6090	758	1012			HSKZE25	Uni-ZAP XR
1814	877194	(AL023654) dJ549K18.1 (novel protein similar to GS2) [Homo sapiens] >sp CAB63061 CAB63061 dJ549K18.1 (novel protein similar to GS2) (fragment). Length = 326	emb CAB6306 1.1	6091	238	507	91	91	HCRMP38	pSport1
1815	877195			6092	213	347			HDPXD55	pCMVSPORT 3.0
1816	877200			6093	28	174			HHMMB40	pSport1

1817	877202	(AF090931) PRO0483 [Homo sapiens] >sp AA24046 AA24046 PRO0483. Length = 60	gb AA24046.1 AA24046.1	6094	2	175	77	82	HEQAN41	pCMVSPORT 3.0
1818	877205	Ki-1/57 intracellular antigen [Homo sapiens] >sp O75804 O75804 Ki-1/57 INTRACELLULAR ANTIGEN (FRAGMENT). Length = 299	gb AAC31117.1 AAC31117.1	6095	23	289	72	74	HSDZB30	pBluescript
1819	877206			6096	161	256			HWLWH56	pSport1
1820	877207			6097	120	314			HWLOT46	pSport1
1821	877208			6098	3	143			HOVCR67	pSport1
1822	877211	(AB028981) KIAA1058 protein [Homo sapiens] >sp BAA83010 BAA83010 KIAA1058 protein (fragment). Length = 1534	dbj BAA83010.1 BAA83010.1	6099	2	496	59	75	HLHSV54	pBluescript
1823	877212			6100	514	696			HSYBZ84	pCMVSPORT 3.0
1824	877213	(AL031581) /prediction=(method:"genscan", version:"1.0", score:"198.31"); /prediction=(method:"genefinder", version:"084"); /motif=(desc:"Endoplasmic reticulum targeting sequence", dbase:"PROSITE", acc:"PS00014", method:"ppsearch"); />	emb CAA2089.1.1 CAA2089.1.1	6101	35	502	43	60	H2LAC34	pBluescript SK-
1825	877214			6102	343	537			HCQAE29	Lambda ZAP II
1826	877215			6103	3	218			HCRMV19	pSport1
1827	877218			6104	19	429			HWLMF31	pSport1
1828	877220			6105	1	195			HFIIZ28	pSport1
1829	877222			6106	2	151			HCQDK28	Lambda ZAP II
1830	877229			6107	88	288			HHEQ129	pCMVSPORT 3.0
1831	877230			6108	363	503			HTWFA44	pSport1
1832	877231	high mobility group protein 2a [Homo sapiens] >sp O15347 O15347 HIGH MOBILITY GROUP PROTEIN 2A. Length = 200	emb CAA7114.3.1 CAA7114.3.1	6109	1	366	100	100	HOCMF20	pSport1
1833	877232			6110	146	391			HWMB050	pSport1

1834	877233				6111	196	297			HCQBD64	Lambda ZAP II
1835	877234				6112	417	677			HATAP30	Uni-ZAP XR
1836	877235	TB1 [Homo sapiens] >sp Q04197 Q04197 TB1 PROTEIN (FRAGMENT). Length = 434	gb AAA03587.1		6113	1	759	93	93	H2LBB51	pBluescript SK-
1837	877237				6114	327	830			H6EDT19	Uni-ZAP XR
1838	877240	(AF180919) RNA lariat debranching enzyme [Homo sapiens] >sp AAD53327 AAD53327 RNA lariat debranching enzyme. Length = 544	gb AAD53327.2		6115	3	542	98	98	HWLOW87	pSport1
1839	877242				6116	176	364			HWLMB22	pSport1
1840	877247	IDN4-GGTR14 PROTEIN. >dbj BAA77334.1  (AB019493) IDN4-GGTR9 [Homo sapiens] {SUB 57-414} >emb CAA22908.1  (AL035303) hypothetical protein [Homo sapiens] {SUB 159-414} Length = 414	sp Q9Y6Y5 Q9Y6Y5		6117	3	218	85	85	H2CBA14	pBluescript SK-
1841	877250	(AF234783) tescalcin [Mus musculus] Length = 214	gb AAF40439.1		6118	1	771	96	98	HCRNM80	pSport1
1842	877251				6119	76	357			HCQCC04	Lambda ZAP II
1843	877254	heat-stable enterotoxin receptor [Homo sapiens] >pir A40940 OYHUHX heat-stable enterotoxin receptor precursor - human >sp P25092 HSEH_HUMAN HEAT-STABLE ENTEROTOXIN RECEPTOR PRECURSOR (GC-C) (INTESTINAL GUANYLATE CYCLASE) (EC 4.6.1.2) (STA RECEPTOR). Length = 400	gb AAA36655.1		6120	41	400	92	96	HCQC117	Lambda ZAP II
1844	877255				6121	109	324			HF1YJ63	pSport1
1845	877256				6122	379	480			HWLOW51	pSport1
1846	877257				6123	135	341			HHFBA07	Uni-ZAP XR
1847	877258				6124	77	316			HWLDO51	pSport1
1848	877261				6125	3	278			HLSAE05	pSport1
1849	877263				6126	3	317			HCRPJ05	pSport1

1850	877264	!!!! ALU SUBFAMILY J WARNING ENTRY !!!! Length = 591	sp P39188 AL UI_HUMAN	6127	359	484	62	62	HCYBD05	pBluescript SK-
1851	877272	peptide YY [Homo sapiens] >dbj BAA02997.1  peptide YY precursor [Homo sapiens] >pir S33795 S33795 peptide YY (clone S) - human >sp P10082 PYY_HUMAN PEPTIDE YY PRECURSOR (PYY). >dbj BAA02998.1  peptide YY precursor variant [Homo sapiens] {SUB 1-90} >pir A3	gb AAA36433. 1	6128	7	534	78	79	HKLSD44	pBluescript
1852	877274	BMAL1a [Homo sapiens] >sp O00327 BMAL_HUMAN BMAL1 PROTEIN (BRAIN AND MUSCLE ARNT-LIKE 1) (MEMBER OF PAS PROTEIN 3) (MOP3) (BHLH- PAS PROTEIN JAP3). Length = 583	dbj BAA19968 .1	6129	856	1470	94	94	HFIXP45	pSport1
1853	877275			6130	347	535			HAQNS64	pSport1
1854	877280	cDNA EST yk552d5.3 comes from this gene [Caenorhabditis elegans] >pir T21378 T21378 hypothetical protein F25H9.7 - Caenorhabditis elegans >sp CAB02994 CAB02994 F25H9.7 protein. Length = 137	emb CAB0299 4.2	6131	2	250	42	63	HCQDG09	Lambda ZAP II
1855	877281	(AF014898) NADH dehydrogenase subunit 2 [Homo sapiens] >sp AAC25457 AAC25457 NADH dehydrogenase subunit 2 (fragment). Length = 347	gb AAC25457. 1	6132	150	308	57	61	HCQCP81	Lambda ZAP II
1856	877282	mast cell carboxypeptidase A precursor [Homo sapiens] >gb AAA59568.1  carboxypeptidase A [Homo sapiens] >pir A43929 A43929 carboxypeptidase A (EC 3.4.17.1) CPA3 precursor - human >sp P15088 CBPC_HUMAN MAST CELL CARBOXYPEPTIDASE A PRECURSOR (EC 3.4.17.1) (	gb AAA35652. 1	6133	2	541	97	98	HLHEI46	Uni-ZAP XR
1857	877283			6134	221	346			HCROB02	pSport1
1858	877284	laminin A chain [Homo sapiens] Length = 2628	emb CAA4141 8.1	6135	2	637	100	100	HFKIN68	Uni-ZAP XR

1859	877285				6136	431	655				HWHGC93	pCMV Sport 3.0
1860	877287	KIAA0204 protein [Homo sapiens] >sp Q92603 Q92603 KIAA0204 PROTEIN. Length = 1152	dbj BAA13195.1		6137	1	558	86	88		H2CBC75	pBluescript SK-
1861	877288				6138	3	263				H2LAW79	pBluescript SK-
1862	877289				6139	7	264				HCE2C40	Uni-ZAP XR
1863	877290	(AB032995) KIAA1169 protein [Homo sapiens] >sp BAA86483 BAA86483 KIAA1169 protein (fragment). Length = 775	dbj BAA86483.1		6140	3	1784	88	88		HMCDH54	Uni-ZAP XR
1864	877295	interferon-induced Mx protein [Homo sapiens] >pir B33481 B33481 interferon-induced viral resistance protein MxB - human >sp P20592 MX2_HUMAN INTERFERON-REGULATED RESISTANCE GTP-BINDING PROTEIN MXB (P78-RELATED PROTEIN). >gb AAA36459.1  p78-related protein	gb AAA36338.1		6141	3	1133	100	100		HTPF64	Uni-ZAP XR
1865	877298				6142	47	307				H2CBQ45	pBluescript SK-
1866	877299				6143	2	130				HCQAD77	Lambda ZAP II
1867	877301				6144	136	363				HKLSB60	pBluescript
1868	877310	neuronal PAS2 [Homo sapiens] >sp Q99743 NP2_HUMAN NEURONAL PAS DOMAIN PROTEIN 2 (NEURONAL PAS2) (MEMBER OF PAS PROTEIN 4) (MOP4). Length = 824	gb AAB47250.1		6145	143	478	97	98		HLHTC92	pBluescript
1869	877319				6146	1	225				HWLXP93	pSport1
1870	877320				6147	3	98				HUKBC55	Lambda ZAP II
1871	877321				6148	2	127				HE9FH60	Uni-ZAP XR

1872	877324				6149	1	222			HHEFC89	pCMVSPORT 3.0
1873	877326	(AF034374) molybdenum cofactor biosynthesis protein C [Homo sapiens] >sp O1494 O14941 MOLYBDENUM COFACTOR BIOSYNTHESIS PROTEIN C. >emb CAA11898.1  (AJ224328) MOCS1B protein [Homo sapiens] {SUB 27-249} Length = 249	gb AAB87524.1	6150	1	105	100	100		HCEOF08	Uni-ZAP XR
1874	877327			6151	305	442				HLHBZ17	Uni-ZAP XR
1875	877329			6152	1	198				HWLRP86	pSport1
1876	877331	(AF009668) polyprotein [multiple sclerosis associated retrovirus] >sp O36581 O36581 POLYPROTEIN (FRAGMENT). >gb AAB66527.1  (AF009666) protease [multiple sclerosis associated retrovirus] {SUB 1-114} Length = 768	gb AAB66528.1	6153	396	241	84	86		HISEQ81	pSport1
1877	877332			6154	346	594				HWLWA07	pSport1
1878	877333			6155	206	493				H2CBS31	pBluescript SK-
1879	877334	STM-7 [Homo sapiens] >sp Q92749 Q92749 TYPE 1 PHOSPHATIDYLINOSITOL-4-PHOSPHATE 5-KINASE BETA (EC 2.7.1.68) (STM-7 PROTEIN). >gb AAC50916.1  type 1 phosphatidylinositol-4-phosphate 5-kinase beta [Homo sapiens] {SUB 112-502} >gb AAC50914.1  type 1 phosphati	emb CAA6322.4.1	6156	178	444	59	65		H2CBN88	pBluescript SK-
1880	877336			6157	139	246				HWLOK01	pSport1
1881	877338	(AF132818) colon Kruppel-like factor [Homo sapiens] >sp AAF18307 AAF18307 Colon Kruppel-like factor. >dbj BAA03393.1  BTEB2 [Homo sapiens] {SUB 239-457} Length = 457	gb AAF18307.1 AF1328	6158	2	1162	93	93		H2CBR23	pBluescript SK-
1882	877339	(AF131882) basic-transcription-element-binding-protein 2 [Oryctolagus cuniculus] Length = 219	gb AAF37005.1	6159	137	379	98	98		HCYBK82	pBluescript SK-

1883	877340	adenosine A2b receptor [Homo sapiens] >emb CAA48505.1  A2b adenosine receptor [Homo sapiens] >pir JC1229 JC1229 adenosine receptor A2b - human >sp P29275 AA2B_HUMAN ADENOSINE A2B RECEPTOR. Length = 332	gb AAA51598.1	6160	2	427	100	100	HCRMK82	pSport1
1884	877344			6161	559	765			HDTBO06	pCMVSPORT 2.0
1885	877346			6162	1406	1693			HEGAM94	Uni-ZAP XR
1886	877347			6163	1357	1515			HDTAH72	pCMVSPORT 2.0
1887	877351	(AF048700) gastrointestinal peptide [Homo sapiens] >sp O60575 O60575 GASTROINTESTINAL PEPTIDE. Length = 86	gb AAC05124.1	6164	2	316	90	90	HARAG42	pBluescript SK-
1888	877355	cytochrome P450 PCN3 [Homo sapiens] >pir A34101 A34101 cytochrome P450 3A5 - human >sp P20815 CP35_HUMAN CYTOCHROME P450 3A5 (EC 1.14.14.1) (CYP3A5) (P450-PCN3). >gb AAB00083.1  cytochrome P450 [Homo sapiens] {SUB 1-24} Length = 502	gb AAA02993.1	6165	99	305	100	100	HCQDL20	Lambda ZAP II
1889	877356	cytochrome P450 PCN3 [Homo sapiens] >pir A34101 A34101 cytochrome P450 3A5 - human >sp P20815 CP35_HUMAN CYTOCHROME P450 3A5 (EC 1.14.14.1) (CYP3A5) (P450-PCN3). >gb AAB00083.1  cytochrome P450 [Homo sapiens] {SUB 1-24} Length = 502	gb AAA02993.1	6166	278	514	100	100	HLQGF34	Lambda ZAP II
1890	877358	6-pyruvoyl-tetrahydropterin synthase [Homo sapiens] >dbj BAA04224.1  6-pyruvoyl-tetrahydropterin synthase [Homo sapiens] >gb AAA51541.1  6-pyruvoyl-tetrahydropterin synthase [Homo sapiens] >gb AAB64229.1  putative synthase [Homo sapiens] >gb AAC16970.1  6-pyruvoyl-	dbj BAA04959.1	6167	3	359	100	100	HCDCF78	Uni-ZAP XR

1891	877361	ras-like protein [Homo sapiens] >pir D34788 TVHUC4 transforming protein ras (teratocarcinoma clone TCI10) - human >sp P17081 RTCO_HUMAN GTP-BINDING PROTEIN TCI10. Length = 213	gb AAA36547.1	6168	2	577	100	100	HMIBES9	Uni-ZAP XR
1892	877363			6169	141	293			HMKAK86	pSport1
1893	877370	antigenic surface determinant OA3 [Homo sapiens] >pir A48997 A48997 tumor surface antigen OA3-323 - human >sp Q08722 CD47_HUMAN LEUKOCYTE SURFACE ANTIGEN CD47 PRECURSOR (ANTIGENIC SURFACE DETERMINANT PROTEIN OA3) (INTEGRIN ASSOCIATED PROTEIN) (IAP) (MER6)	emb CAA4919.6.1	6170	1	1059	94	94	H6EDF71	Uni-ZAP XR
1894	877373	insulin-like growth factor-binding protein [Homo sapiens] >gb AAA52706.1  growth factor-binding protein-3 [Homo sapiens] >emb CAA46087.1  insulin-like growth factor binding protein 3 [Homo sapiens] >pir A36578 IOHU3 insulin-like growth factor-binding prot	gb AAA52541.1	6171	8	1081	90	90	HOELC15	Uni-ZAP XR
1895	877375	(AJ002190) dihydroxyacetone phosphate acyltransferase [Homo sapiens] >gb AAC24505.1  (AF043937) peroxisomal acyl-CoA: dihydroxyacetonephosphate acyltransferase [Homo sapiens] >sp O15228 DAPT_HUMAN DIHYDROXYACETONE PHOSPHATE ACYLTRANSFERASE (EC 2.3.1.42) (D	emb CAA0524.2.1	6172	120	539	95	95	HAJBN08	pCMVSPORT 3.0
1896	877377	protein tyrosine phosphatase [Homo sapiens] >gb AA66496.1  protein phosphatase [Homo sapiens] >sp Q16667 CDN3_HUMAN CYCLIN-DEPENDENT KINASE INHIBITOR 3 (EC 3.1.3.48) (EC 3.1.3.16) (CDK2- ASSOCIATED DUAL SPECIFICITY PHOSPHATASE) (KINASE ASSOCIATED PHOSPHA	gb AA60222.1	6173	31	717	91	91	HFVHT62	pBluescript



1897	877378	protein tyrosine phosphatase [Homo sapiens] >gb AA66496.1  protein phosphatase [Homo sapiens] >sp Q16667 CDN3_HUMAN CYCLIN-DEPENDENT KINASE INHIBITOR 3 (EC 3.1.3.48) (EC 3.1.3.16) (CDK2- ASSOCIATED DUAL SPECIFICITY PHOSPHATASE) (KINASE ASSOCIATED PHOSPHA	gb AAA60222.1	6174	57	605	99	99	HILB232	pBluescript SK-
1898	877380	microtubule associated protein [Homo sapiens] >pir 37356 37356 epithelial microtubule-associated protein, 115K - human >sp Q14244 Q14244 MICROTUBULE ASSOCIATED PROTEIN (DJ406A7.2.1) (MICROTUBULE ASSOCIATED PROTEIN E-MAP-115). >emb CAB37984.1  (AL023284)	emb CAA5208.6.1	6175	1	1782	77	77	HAPOR25	Uni-ZAP XR
1899	877384	nuclear autoantigen [Homo sapiens] >pir A37244 A37244 nuclear autoantigen Sp-100 - human Length = 480	gb AAA35537.1	6176	157	1035	84	84	HELB30	Uni-ZAP XR
1900	877387	(AK001332) unnamed protein product [Homo sapiens] Length = 682	dbj BAA91631.1	6177	2	2161	54	72	HHEFMH12	Uni-ZAP XR
1901	877388	ligand for eph-related receptor tyrosine kinases [Homo sapiens] >gb AAC51203.1  putative EPH-related PTK receptor ligand LERK-8 [Homo sapiens] >sp Q15768 EFB3_HUMAN EPHRIN-B3 PRECURSOR (EPH-RELATED RECEPTOR TYROSINE KINASE LIGAND 8) (LERK-8) (EPH-RELATED	gb AAB05170.1	6178	1	81	100	100	HBXAC19	ZAP Express
1902	877390	(AC004922) similar to G10 protein; similar to AAC14190 (PID:g3064070) [Homo sapiens] >sp AAF03505 AAF03505 WUGSC:H_DJ0900K19.2 protein. Length = 144	gb AAF03505.1 AC0049	6179	499	960	100	100	HWLNV37	pSport1

1903	877393	argininosuccinate synthetase [Homo sapiens] >emb CAA25771.1  argininosuccinate synthetase (aa 1-412) [Homo sapiens] >pir A01195 AJHURS argininosuccinate synthetase (EC 6.3.4.5) - human >sp P00966 ASSY_HUMAN ARGININOSUCCINATE SYNTHASE (EC 6.3.4.5) (CITRULLIN)	gb AAA51783.1	6180	1205	2530	96	96	HWHQH17	pCMVSPORT 3.0
1904	877396			6181	340	804			HDPFP36	pCMVSPORT 3.0
1905	877406	Rho-associated, coiled-coil containing protein kinase p160ROCK [Homo sapiens] >pir S69211 S69211 serine/threonine-specific protein kinase (EC 2.7.1.-), Rho-associated - human >sp Q13464 Q13464 RHO-ASSOCIATED, COILED-COIL CONTAINING PROTEIN KINASE P160ROCK	gb AAB02814.1	6182	1296	2498	93	94	HCFMY07	pSport1
1906	877408	procollagen alpha 2(V) [Homo sapiens] >pir A31427 CGHU2V collagen alpha 2(V) chain precursor - human >sp P05997 CA25_HUMAN COLLAGEN ALPHA 2(V) CHAIN PRECURSOR >sp CAA75002 CAA75002 Procollagen alpha 2(V). >emb CAA28454.1  pro- alpha (V) collagen (AA 1099)	emb CAA75002.1	6183	3	1013	100	100	HSYBP46	pCMVSPORT 3.0
1907	877411			6184	2	313			HCRQK59	pSport1
1908	877437	multispanning membrane protein [Homo sapiens] >sp O15321 O15321 MULTISPANNING MEMBRANE PROTEIN. Length = 606	gb AAC51782.1	6185	93	314	100	100	HWLXK44	pSport1
1909	877630	(AF151877) CGI-119 protein [Homo sapiens] >sp Q9Y3C2 Q9Y3C2 CGI-119 PROTEIN. >gb AAF14868.1 AF113127.1 (AF113127) SIR protein [Homo sapiens] {SUB 21-258} Length = 258	gb AAD34114.1 AF1518	6186	1256	1657	91	91	HE8DZ94	Uni-ZAP XR
1910	877881			6187	3	662			HTELO87	Uni-ZAP XR
1911	878199			6188	245	553			HWLQL72	pSport1

1912	878207	(AK001523) unnamed protein product [Homo sapiens] Length = 165	dbj BAA91739.1	6189	572	1069	89	89	HBJL05	Uni-ZAP XR
1913	878238	similar to D. melanogaster trithorax protein [Caenorhabditis elegans] >pir T34384 T34384 hypothetical protein T26A5.7 - Caenorhabditis elegans >sp Q22795 Q22795 HYPOTHETICAL 27.6 KD PROTEIN. Length = 242	gb AAC77512.1	6190	3	272	60	73	HE2HC14	Uni-ZAP XR
1914	878274	(AF203978) MAX-like bHLHZIP protein [Homo sapiens] >sp AAF14638 AAF14638 MAX-like bHLHZIP protein. Length = 244	gb AAF14638.1 AF2039	6191	2	487	100	100	HDTHI51	pCMVSPORT 2.0
1915	878374	(AB033010) KIAA1184 protein [Homo sapiens] >sp BAA86498 BAA86498 KIAA1184 protein (fragment). Length = 380	dbj BAA86498.1	6192	2	1051	89	89	HRGDE77	Uni-ZAP XR
1916	878403	3-hydroxy-3-methylglutaryl coenzyme A synthase [Homo sapiens] >pir S45497 S45497 hydroxymethylglutaryl-CoA synthase (EC 4.1.3.5), cytosolic, adrenal isoform - human >sp Q01581 HMCS_HUMAN HYDROXYMETHYLGLUTARYL-COA SYNTHASE, CYTOPLASMIC (EC 4.1.3.5) (HMG-CO	gb AA62411.1	6193	283	882	91	93	HHFHR53	Uni-ZAP XR
1917	878433	(AF096895) chemokine-like factor 1 [Homo sapiens] >sp AAF06722 AAF06722 Chemokine-like factor 1. Length = 99	gb AAF06722.1 AF0968	6194	105	443	100	100	HTPAY82	Uni-ZAP XR
1918	878436	(AK001682) unnamed protein product [Homo sapiens] Length = 242	dbj BAA91833.1	6195	85	1524	99	99	HMUBQ39	pCMVSPORT 3.0
1919	878560	(AF108139) radical fringe [Homo sapiens] >sp Q9Y644 Q9Y644 RADICAL FRINGE (FRAGMENT). Length = 191	gb AAD34321.1 AF1081	6196	331	2	98	100	HCEYN60	Uni-ZAP XR
1920	878800	ORF_f418 [Escherichia coli] >gb AAD13442.1  (AF000464) orf, hypothetical protein [Escherichia coli] >pir S40824 S40824 hypothetical 48K protein (glnA-fdhE intergenic region) - Escherichia coli >sp P32140 YIHS_ECOLI HYPOTHETICAL 47.4 KD PROTEIN IN GLNA-RBN	gb AAB03013.1	6197	223	2	100	100	HWHGF46	pCMVSPORT 3.0

1921	878909	KIAA0182 [Homo sapiens] >sp Q14687 Y182_HUMAN HYPOTHETICAL PROTEIN KIAA0182 (FRAGMENT). Length = 1157	dbj BAA11499 ..	6198	669	1421	84	85	HPMSF50	pBluescript
1922	878917	KIAA0069 [Homo sapiens] >sp Q15041 Y069_HUMAN HYPOTHETICAL PROTEIN KIAA0069 (HA1508) (FRAGMENT). Length = 226	dbj BAA06683 ..	6199	2	346	77	77	HTWEA61	pSport1
1923	878931			6200	318	506			HILBF77	pBluescript SK-
1924	879009	(AF035606) calcium binding protein [Homo sapiens] >gb AAFI4336.1 U58773_1 calcium binding protein [Homo sapiens] >sp O75340 O75340 CALCIUM BINDING PROTEIN. >sp AAFI4336 AAFI4336 Calcium binding protein. Length = 191	gb AAC27697. ..	6201	618	1040	100	100	HTEHX05	Uni-ZAP XR
1925	879234			6202	211	903			HPHAA47	Uni-ZAP XR
1926	879386	(AF161516) HSPC167 [Homo sapiens] >sp AAF29131 AAF29131 HSPC167. Length = 586	gb AAF29131. ..	6203	419	991	100	100	HHFJJ61	Uni-ZAP XR
1927	879484	(AF053651) cellular apoptosis susceptibility protein [Homo sapiens] >sp O75432 O75432 CELLULAR APOPTOSIS SUSCEPTIBILITY PROTEIN. Length = 971	gb AAC35297. ..	6204	885	2108	100	100	H2CAA49	pBluescript SK-
1928	879595			6205	3	419			HCRNW08	pSport1
1929	879661	(AF151079) HSPC245 [Homo sapiens] Length = 124	gb AAF36165. ..	6206	158	982	100	100	HNTDJ29	pCMVSPORT 3.0
1930	879886			6207	502	762			HCRNM29	pSport1
1931	880071			6208	565	921			HTPAM76	Uni-ZAP XR
1932	880074	(AF112214) ribosomal protein L13 [Homo sapiens] >sp AAF17202 AAF17202 Ribosomal protein L13. Length = 172	gb AAF17202. ..	6209	290	829	99	100	HCHOB95	pSport1
1933	880418			6210	1082	1339			HLSAA96	pSport1

1934	880578				6211	130	255				HBBMA61	pCMVSPORT 1
1935	880649	(AF119297) neuroendocrine-specific protein-like protein 1 [Homo sapiens] >gb AAC99319.1  (AF059524) reticulon gene family protein [Homo sapiens] >gb AAD20951.1  (AF059529) reticulon gene family protein [Homo sapiens] >sp O95197 O95197 RETICULON PROTEIN. L	gb AAD26810.1 AF1192	6212	60	866	100	100	100	HE8QG48	Uni-ZAP XR	
1936	880694	(AB001740) p27 [Homo sapiens] >sp O60232 AA27_HUMAN AUTOANTIGEN P27. Length = 199	dbj BAA25263.1	6213	1	618	88	88	88	HHENW13	pCMVSPORT 3.0	
1937	880747	[Homo sapiens] >sp Q14089 Q14089 HYPOTHETICAL 40.0 KD PROTEIN (FRAGMENT). Length = 364	dbj BAA18909.1	6214	3	1751	74	77	77	HE8SB64	Uni-ZAP XR	
1938	880927			6215	422	922				HKAEN78	pCMVSPORT 2.0	
1939	880994			6216	339	527				HOSML44	Uni-ZAP XR	
1940	881052	(AB020657) KIAA0850 protein [Homo sapiens] >emb CAB72329.1  (AL078644) bG279B7.1.1 (NS1-binding protein (KIAA0850, BTB/POZ domain and Kelch motifs containing protein)) [Homo sapiens] >sp Q9Y6Y0 Q9Y6Y0 KIAA0850 PROTEIN. Length = 642	dbj BAA74873.1	6217	3	1565	96	96	96	HTEEZ62	Uni-ZAP XR	
1941	881074	Similar to a C.elegans protein in cosmid C14H10 [Homo sapiens] >sp O00236 O00236 KIAA0251 (FRAGMENT). Length = 820	dbj BAA19780.1	6218	3	1277	97	97	97	HOAAH52	Uni-ZAP XR	
1942	881104	(AL050318) dJ977B1.3.1 (novel protein similar to putative RAB5-interacting protein (isoform 1)) [Homo sapiens] >gb AAF17201.1 AF112213_1 (AF112213) putative Rab5-interacting protein [Homo sapiens] >sp AAF17201 AAF17201 Putative Rab5-interacting protein. L	emb CAB7536.7.1	6219	265	654	92	92	92	HSDXB50	pBluescript	

1943	881105	(AL050318) dJ977B1.3.1 (novel protein similar to putative RAB5-interacting protein (isoform 1)) [Homo sapiens] >gb AAFI7201.1 AF112213_1 (AF112213) putative Rab5-interacting protein [Homo sapiens] >sp AAF17201 AAF17201 Putative Rab5-interacting protein. L	emb CAB7536 7.1	6220	127	576	100	100	HFKM124	Uni-ZAP XR
1944	881219	(AC004882) similar to CAA16821 (PID:g3255952) [Homo sapiens] >sp AAF03515 AAF03515 WUGSC:H_DJ076B20.5 protein (fragment). Length = 620	gb AAF03515.1 AC0048	6221	3	2348	95	95	HEOQC11	pSport1
1945	881221	cell growth regulator CGR19 [Homo sapiens] >sp Q99675 Q99675 CELL GROWTH REGULATOR CGR19. Length = 332	gb AAC50897.1	6222	2	1036	92	92	HWMB122	pSport1
1946	882330			6223	1079	1477			HETDL42	Uni-ZAP XR
1947	882715	hypothetical protein [Bos taurus] >sp O18975 O18975 HYPOTHETICAL 16.6 KD PROTEIN (FRAGMENT). Length = 145	emb CAB0666 4.1	6224	1	327	72	74	HMEKW44	Lambda ZAP II
1948	882729	(AF151023) HSPC189 [Homo sapiens] Length = 222	gb AAF36109.1 AF1510	6225	110	766	80	80	HCEDM42	Uni-ZAP XR
1949	882762			6226	1	489			HCRNZ31	pSport1
1950	883172			6227	98	652			HWMBU89	pSport1
1951	883201			6228	295	468			HUFBY15	pSport1
1952	883254	(AC003007) gene product (partial) [Homo sapiens] >sp O75201 O75201 HYPOTHETICAL 64.6 KD PROTEIN (FRAGMENT). Length = 580	gb AAC31671.1	6229	3	695	71	71	HIBCE91	Other
1953	883371	(AJ245719) brk kinase substrate [Homo sapiens] >sp CAB65105 CAB65105 Brk kinase substrate. Length = 403	emb CAB6510 5.1	6230	3	917	85	85	HWLKF77	pSport1

1954	883753	(AB000712) CPE-receptor [Homo sapiens] >sp O14493 CLD4_HUMAN CLAUDIN-4 (CLOSTRIDIUM PERFRINGENS ENTEROTOXIN RECEPTOR) (CPE-RECEPTOR) (CPE-R). Length = 209	dbj BAA22984 .1	6231	239	866	1129	77	77	HOGCA75	pCMVSPORT 2.0
1955	883799			6232	866	1129				HOGCA75	pCMVSPORT 2.0
1956	883945			6233	59	157				HWLUT61	pSPORT1
1957	883971			6234	115	303				HLTBA42	Uni-ZAP XR
1958	884038	(AF151882) CGI-124 protein [Homo sapiens] >sp Q9Y3C6 Q9Y3C6 CGI-124 PROTEIN (EC 5.2.1.8). Length = 166	gb AAD34119. 1 AF1518	6235	208	741		93	93	HHEHB82	pCMVSPORT 3.0
1959	884095	(AK000654) unnamed protein product [Homo sapiens] Length = 248	dbj BAA91309 .1	6236	432	956		46	72	HE2PR08	Uni-ZAP XR
1960	884161	(AK001845) unnamed protein product [Homo sapiens] Length = 612	dbj BAA91938 .1	6237	3	1385		99	100	HMKAN71	pSPORT1
1961	884168	(AF127036) calcium-activated chloride channel protein 1 [Homo sapiens] >sp AAD25487 AAD25487 Calcium-activated chloride channel protein 1. Length = 914	gb AAD25487. 1 AF1270	6238	2	2776		96	96	HSIFV30	Uni-ZAP XR
1962	884215	(AB026289) protein kinase SID6-1512 [Homo sapiens] >sp BAA85045 BAA85045 Protein kinase SID6-1512. Length = 306	dbj BAA85045 .1	6239	239	1171		81	90	HNTSY52	pSPORT1
1963	884379	(AF196972) JM24 protein [Homo sapiens] >sp AAF06800 AAF06800 JM24 protein (fragment). Length = 476	gb AAF06800. 1 AF1969	6240	2	775		73	75	HCR0M43	pSPORT1
1964	884529	(AF151908) CGI-150 protein [Homo sapiens] >sp Q9Y3E8 Q9Y3E8 CGI-150 PROTEIN. Length = 504	gb AAD34145. 1 AF1519	6241	237	683		100	100	HLWCF60	pCMVSPORT 3.0
1965	884719	(AB028859) hDj9 [Homo sapiens] >emb CAB65118.1 (A1250137) ERj3 protein [Homo sapiens] >sp CAB65118 CAB65118 ERj3 protein precursor. >sp BAA88307 BAA88307 HDj9. Length = 358	dbj BAA88307 .1	6242	59	436		68	71	HWLKD85	pSPORT1

1966	885350	(AB011532) MEGF6 [Rattus norvegicus] >pir T13954 T13954 MEGF6 protein - rat >sp O88281 O88281 MEGF6. Length = 1574	dbj BAA32462 .1	6243	430	1581	45	56	HCRMX54	pSport1
1967	885476			6244	432	908			HTPHK88	Uni-ZAP XR
1968	885484	ORF4 [Rattus norvegicus] >pir S21348 S21348 probable pol polyprotein-related protein 4 - rat >sp Q63306 Q63306 LONG INTERSPERSED REPETITIVE DNA CONTAINING 7 ORF'S. Length = 275	emb CAA3764 7.1	6245	396	476	54	73	HCQBD35	Lambda ZAP II
1969	885511			6246	178	408			HLQFI67	Lambda ZAP II
1970	886331	(AF026124) schwannoma-associated protein [Mus musculus] >sp O35405 O35405 SCHWANNOMA- ASSOCIATED PROTEIN. Length = 488	gb AAC73069. 1	6247	3	755	37	57	HAJBV26	pCMVSPORT 3.0
1971	886505	(AF161410) HSPC292 [Homo sapiens] >sp AAF28970 AAF28970 HSPC292 (fragment). Length = 164	gb AAF28970. 1 AAF1614	6248	565	975	100	100	HBJJF90	Uni-ZAP XR
1972	886527			6249	1	375			HWLFB44	pSport1
1973	886788	(AK001350) unnamed protein product [Homo sapiens] Length = 326	dbj BAA91642 .1	6250	96	962	98	99	HCE4U96	Uni-ZAP XR
1974	886914	A33 antigen precursor [Homo sapiens] >sp Q99795 A33_HUMAN CELL SURFACE A33 ANTIGEN PRECURSOR. Length = 319	gb AAC50957. 1	6251	3	443	100	100	HWLEL48	pSport1
1975	887098	(AF161453) HSPC335 [Homo sapiens] >sp AAF29013 AAF29013 HSPC335 (fragment). Length = 159	gb AAF29013. 1 AAF1614	6252	3	539	89	90	HTGBT14	Uni-ZAP XR
1976	887114	(AF067797) aquaporin 8 [Homo sapiens] >sp AAF19050 AAF19050 Aquaporin 8. Length = 261	gb AAF19050. 1	6253	297	1160	83	83	HKLRB09	pBluescript
1977	887155			6254	3	497			H2LAS29	pBluescript SK-
1978	887172	(AK000700) unnamed protein product [Homo sapiens] Length = 370	dbj BAA91327 .1	6255	505	1071	90	92	HMEKH10	Lambda ZAP II



1979	887192	urokinase [synthetic construct] >emb CAA00996.1  human u-PA cDNA insert [synthetic construct] >emb CAA01390.1  uPA [Homo sapiens] >emb CAA01559.1  pro-Urokinase [Homo sapiens] >emb CAA02215.1  u-PA [Homo sapiens] >dbj BAA00175.1  pro-urokinase precursor [	emb CAA00829.1	6256	195	1205	95	96	HWLWR39	pSport1
1980	887280			6257	527	793			HADME31	pBluescript
1981	887399	SERUM PARAOXONASE/ARYLESTERASE 3 (EC 3.1.1.2) (EC 3.1.8.1) (PON 3) (SERUM ARYLDIAKYLPHOSPHATASE 3) (A-ESTERASE 3) (AROMATIC ESTERASE 3). >gb AAC62430.1  (AC005021) serum paraoxonase/arylesterase [Homo sapiens] {SUB 1-122} Length = 354	sp Q15166 PO N3_HUMAN	6258	25	1134	99	99	HFVJL45	pBluescript
1982	887421	(AJ009936) nuclear hormone receptor PRR1-A [Homo sapiens] >sp CAB55489 CAB55489 Nuclear hormone receptor PRR1-A. >emb CAB55491.1  (AJ009936) nuclear hormone receptor PRR1-B [Homo sapiens] {SUB 56-434} Length = 434	emb CAB55489.1	6259	3	281	98	98	HWLFE56	pSport1
1983	887475			6260	218	475			HSWBP93	pCMVSPORT 3.0
1984	887535	unnamed protein product [Sus scrofa] >pir S52130 S52130 vascular endothelial growth factor - pig >sp P49151 VEGF_PIG VASCULAR ENDOTHELIAL GROWTH FACTOR PRECURSOR (VEGF) (VASCULAR PERMEABILITY FACTOR) (VPF). Length = 190	emb CAA57143.1	6261	180	464	86	89	HSLJF91	Uni-ZAP XR
1985	887803			6262	377	757			HKLSC61	pBluescript
1986	887857	(AJ011497) Claudin-7 [Homo sapiens] >sp O95471 CLD7_HUMAN CLAUDIN-7. Length = 211	emb CAA09626.1	6263	319	1059	100	100	HLJEA63	pCMVSPORT 1

1987	887892	2.19 [Homo sapiens] >emb CAA39090.1  2.19 protein [Homo sapiens] >gb AA92652.1  2.19 [Homo sapiens] >pir I37095 I37095 gene 2.19 protein - human >sp P98173 P98173_HUMAN 2.19 PROTEIN PRECURSOR. Length = 230	emb CAA6064.5.1	6264	85	519	59	78	HWLOA40	pSport1
1988	887936	(AF131758) [Homo sapiens] >sp O95881 O95881.1 Length = 172	gb AAD20035.1	6265	2	199	100	100	HCQCF10	Lambda ZAP II
1989	887996	(AB006077) deleted in oral cancer 1 (doc-1, alias DORC1) [Homo sapiens] >gb AAC77831.1  (AF006484) putative oral tumor suppressor protein [Homo sapiens] >sp O14519 DOC1_HUMAN PUTATIVE ORAL CANCER SUPPRESSOR (DELETED IN ORAL CANCER-1). Length = 115	dbj BAA22937.1	6266	2	403	86	86	HAIBW90	Uni-ZAP XR
1990	888041	similar to protein kinase of X.laavis, has putative transmembrane domain in central region [Homo sapiens] >sp Q14680 Q14680 KIAA0175 PROTEIN. Length = 651	dbj BAA11492.1	6267	2	604	97	97	H2CBE03	pBluescript SK-
1991	888051	fatty acid amide hydrolase [Homo sapiens] >gb AAD13768.1  (AF098019) fatty acid amide hydrolase [Homo sapiens] >sp O00519 FAAH_HUMAN FATTY ACID AMIDE HYDROLASE (EC 3.1.-.-) (OLEAMIDE HYDROLASE). Length = 579	gb AAB58505.1	6268	2	1066	62	64	HE9Q119	Uni-ZAP XR
1992	888063	(AF073771) RNA polymerase II termination factor [Homo sapiens] >sp O75921 O75921 RNA POLYMERASE II TERMINATION FACTOR. Length = 1162	gb AAC64044.1	6269	1	399	91	91	HJACE25	pBluescript SK-
1993	888153	(AB013357) 49 kDa zinc finger protein [Mus musculus] >pir JE0367 JE0367 zinc finger protein - mouse >sp Q9Z326 Q9Z326 49 KDA ZINC FINGER PROTEIN. Length = 460	dbj BAA37094.1	6270	510	1907	80	80	HMWIR85	Uni-ZAP XR

1994	888254	glutathione S-transferase theta 2 [Homo sapiens] >pir A56847 A56847 glutathione transferase (EC 2.5.1.18) theta-2 - human >sp P30712 GTT2 HUMAN GLUTATHIONE S-TRANSFERASE THETA 2 (EC 2.5.1.18) (GST CLASS-THETA). {SUB 2-244} Length = 244	gb AAB63956.1	6271	2	334	100	100	HCRPV38	pSport1
1995	888402	(AJ271408) Fas-associated factor, FAF1 [Homo sapiens] >gb AAD27713.1 AF132938_1 (AF132938) CGI-03 protein [Homo sapiens] >sp Q9Y2Z3 Q9Y2Z3 CGI-03 PROTEIN. >sp CAB67705 CAB67705 Fas-associated factor, FAF1. >emb CAB63755.1  (AL133631) hypothetical protein	emb CAB67705.1	6272	2	2011	93	93	HSRBB92	Uni-ZAP XR
1996	888523	type I interstitial collagenase [Homo sapiens] >gb AAB36941.1  collagenase [Homo sapiens] >pir A37308 KCHUI interstitial collagenase (EC 3.4.24.7) precursor - human >sp P03956 COG1 HUMAN INTERSTITIAL COLLAGENASE PRECURSOR (EC 3.4.24.7) (MATRIX METALLOPROT	emb CAA3869.1	6273	2	1489	100	100	HSYEA10	pCMVSPORT 3.0
1997	888673			6274	2	286			HE2CC22	Uni-ZAP XR
1998	888708	(AL021106) /prediction=(method:"genscan", version:"1.0", score:"113.71"); /prediction=(method:"genefinder", version:"084"); /match=(desc:"LD30851.5prime LD Drosophila melanogaster embryo pOT2 Drosophila melanogaster cDNA clone LD30851 5prime> >	emb CAA1593.9	6275	241	645	48	62	HOUAC22	Uni-ZAP XR
1999	888720			6276	488	964			HHECU01	pCMVSPORT 3.0
2000	888783	calcium-modulated protein S100-beta [synthetic construct] >pir A91254 BCBOIB S-100 protein beta chain - bovine {SUB 2-92} Length = 92	gb AAA72205.1	6277	111	371	40	68	H2LAP34	pBluescript SK-

2001	888950	growth factor [Mus musculus] >pir A46607 A46607 growth/differentiation factor GDF-3 precursor - mouse >sp Q07104 GDF3_MOUSE GROWTH/DIFFERENTIATION FACTOR 3 PRECURSOR (GDF-3) (VG-1-RELATED PROTEIN 2). Length = 366	gb AAA53034.1	6278	3	1151	70	80	HNTAR08	pCMVSPORT 3.0
2002	889136			6279	311	520			HWLWH66	pSport1
2003	889263	beta-galactosidase [Expression vector pBSII-LUCINT] Length = 69	gb AAB53629.1	6280	1924	2259	94	98	HWLCJ12	pSport1
2004	889299			6281	1329	1520			HNGEF72	Uni-ZAP XR
2005	889300	(AB011145) KIAA0573 protein [Homo sapiens] >sp O60319 O60319 KIAA0573 PROTEIN (FRAGMENT). Length = 451	db JBAA25499.1	6282	3	1409	97	97	HKAEB46	pCMVSPORT 2.0
2006	889323			6283	481	996			HNHON23	Uni-ZAP XR
2007	889368	SThM [Homo sapiens] >sp Q12971 Q12971 SIALYLTRANSFERASE STHM. Length = 374	gb AAA52228.1	6284	3595	3176	98	98	HSKES11	Uni-ZAP XR
2008	889467	(AL096745) hypothetical protein [Homo sapiens] >emb CAB62532.1  (AL096745) hypothetical protein [Homo sapiens] >pir I12548 I12548 hypothetical protein DKFZp586D1022.1 - human >sp CAB62532 CAB62532 Hypothetical 40.6 kd protein. Length = 366	emb CAB62532.1	6285	3	413	99	99	HCETP05	pBluescript
2009	889494	(AF065389) tetraspan NET-4 [Homo sapiens] >gb AAF28869.1 AF121344_1 (AF121344) tetraspanin Tspan-5 [Mus musculus] >sp O60746 O60746 TETRASPAN NET-4. >sp AAF28869 AAF28869 Tetraspanin Tspan-5. Length = 268	gb AAC17120.1	6286	2	361	74	78	HDHEA53	pCMVSPORT 2.0
2010	889700			6287	1	459			HCHAC08	pSport1
2011	889782	aldehyde dehydrogenase [Homo sapiens] Length = 517	gb AAA51693.1	6288	140	463	100	100	HACBT96	Uni-ZAP XR

2012	889954	(AB033050) KIAA1224 protein [Homo sapiens] >sp BAA86538 BAA86538 KIAA1224 protein (fragment). Length = 635	dbj BAA86538 .1	6289	3	1025	85	92	HTLEN01	Uni-ZAP XR
2013	889962	(AF076612) chordin [Homo sapiens] >sp O95254 O95254 CHORDIN (FRAGMENT). Length = 801	gb AAC69835. 1	6290	1	705	34	47	HCROA43	pSport1
2014	889994			6291	282	446			HSLJW05	Uni-ZAP XR
2015	890666	membrane cofactor preprotein (AA -34 to 350) [Homo sapiens] >pir S01896 S01896 membrane cofactor protein precursor - human >gb AAD13968.1 S65879_1 complement system membrane cofactor protein CD46 [Homo sapiens] {SUB 1-34} Length = 384	emb CAA6867 5.1	6292	46	1308	85	85	HTPGK74	Uni-ZAP XR
2016	890698	(AL031295) dJ886K2.3(GALE (UDP-galactose-4- epimerase)) [Homo sapiens] >sp CAB40159 CAB40159 DJ886K2.3(GALE (UDP-galactose-4-epimerase)). Length = 348	emb CAB4015 9.1	6293	17	256	66	69	HHGAB64	Lambda ZAP II
2017	890753			6294	1399	1632			HOSOR86	Uni-ZAP XR
2018	890763	(AL035608) dJ479J7.2 (transmembrane 4 superfamily member 6) [Homo sapiens] >gb AAC64257.1 (AF043906) T245 protein [Homo sapiens] >gb AAC69710.1 (AF053453) tetraspan TM4SF [Homo sapiens] >gb AAD00560.1  A15 homolog [Homo sapiens] >gb AAF08365.1 AF133426_	emb CAB5568 1.1	6295	3	854	100	100	HE9RV77	Uni-ZAP XR
2019	890776	(AF079864) putative G-protein coupled receptor RA1c [Rattus norvegicus] >sp O88628 O88628 PUTATIVE G-PROTEIN COUPLED RECEPTOR RA1C. Length = 320	gb AAD12761. 1	6296	1317	2420	93	97	HPRAJ70	Uni-ZAP XR

2020	890801	(AB035207) Tob2 [Homo sapiens] >emb CAB62938.1 (AL008582) bK223H9.1 (TOB4 (BTG1 family protein)) [Homo sapiens] >sp BAA87042 BAA87042 Tob2. >sp CAB62938 CAB62938 BK223H9.1 (TOB4 (BTG1 family protein)). Length = 344	dbj BAA87042.1	6297	501	1505	65	65	HBODK52	pSport1
2021	890820	(AF009702) GABA-A receptor pi subunit [Homo sapiens] >gb AAC51357.1  GABA-A receptor pi subunit [Homo sapiens] >sp O00591 GAAP_HUMAN GAMMA-AMINO BUTYRIC-ACID RECEPTOR PI SUBUNIT PRECURSOR (GABA(A) RECEPTOR). Length = 440	gb AAC24194.1	6298	134	1516	95	95	HARNK52	pCMVSPORT 3.0
2022	890863	(AK000207) unnamed protein product [Homo sapiens] Length = 478	dbj BAA91009.1	6299	2	1210	45	64	HTLHU22	Uni-ZAP XR
2023	890945	DNA mismatch repair protein homolog [Homo sapiens] >gb AAC50285.1  hMLH1 [Homo sapiens] >pir S43085 S43085 DNA mismatch repair protein MLH1 - human >sp P40692 MLH1_HUMAN MUTL PROTEIN HOMOLOG 1 (DNA MISMATCH REPAIR PROTEIN MLH1). Length = 756	gb AAA82079.1	6300	3	2327	96	96	HWMBB29	pSport1
2024	891125	pancreatic peptidylglycine alpha-amidating monooxygenase, PAM=secretory isoform (clone PAM-15) [human, islet cell tumor cell line QGP-1, Peptide Partial, 905 aa] [Homo sapiens] >sp Q16253 Q16253 PANCREATIC PEPTIDYLGLYCINE ALPHA-AMIDATING MONOOXYGENASE (FR	gb AAB32776.1	6301	2	478	98	98	HWLND63	pSport1
2025	891264	(AK001537) unnamed protein product [Homo sapiens] Length = 129	dbj BAA91746.1	6302	1	633	100	100	HCROQ71	pSport1
2026	891305	KIAA0281 [Homo sapiens] >sp Q92556 Y281_HUMAN HYPOTHETICAL PROTEIN KIAA0281 (HA6725). Length = 247	dbj BAA13397.1	6303	227	2338	55	75	HBINP81	pCMVSPORT 3.0
2027	891896	beta-galactosidase alpha peptide [Cloning vector pSport2] Length = 114	gb AAA67217.1	6304	2	226	69	80	HDLA89	pCMVSPORT 2.0

2028	892113	conserved hypothetical protein MTH68 - Methanobacterium thermoautotrophicum (strain Delta H) Length = 228	pir E69190 E6 9190	6305	844	1557	23	42	HE8FL95	Uni-ZAP XR
2029	892177	(AL137599) hypothetical protein [Homo sapiens] >emb CAB70835.1 (AL137599) hypothetical protein [Homo sapiens] >sp CAB70835 CAB70835 Hypothetical 45.2 kd protein (fragment). Length = 401	emb CAB7083 5.1	6306	33	1067	57	71	HHFGI59	Uni-ZAP XR
2030	892291	cathepsin D [Homo sapiens] >emb CAA28955.1  precursor polypeptide (AA -20 to 392) [Homo sapiens] >gb AAB59529.1  preprocathepsin D [Homo sapiens] >pir A25771 KHHUD cathepsin D (EC 3.4.23.5) precursor - human >sp P07339 CATD_HUMAN CATHEPSIN D PRECURSOR (EC	gb AAA51922. 1	6307	21	1232	96	96	HOFMT75	pCMVSPORT 2.0
2031	892367	!!!! ALU SUBFAMILY SC WARNING ENTRY !!!! Length = 585	sp P39192 AL U5_HUMAN	6308	899	1018	78	84	HWLEQ37	pSport1
2032	892558			6309	770	976			HWLDZ74	pSport1
2033	892563	MAL protein [Homo sapiens] >emb CAA53809.1  MAL [Homo sapiens] >emb CAA54100.1  MAL-a [Homo sapiens] >pir A29472 A29472 T-cell surface glycoprotein MAL, splice form a - human >sp P21145 MAL_HUMAN MYELIN AND LYMPHOCYTE PROTEIN (T-LYMPHOCYTE MATURATION-ASSO	gb AAA36196. 1	6310	1	618	39	50	HPJEB77	Uni-ZAP XR
2034	892820			6311	371	553			HNTST71	pSport1
2035	893223	(AF216312) type II membrane serine protease [Homo sapiens] Length = 423	gb AAF31436. 1 AF2163	6312	2	508	99	99	HCQDQ92	Lambda ZAP II
2036	893457			6313	88	345			HWLCU24	pSport1

2037	893827	cytochrome B [Homo sapiens] >pir A00151 CBHU ubiquinol--cytochrome-c reductase (EC 1.10.2.2) cytochrome b - human mitochondrion >sp P00156 CYB_HUMAN CYTOCHROME B. >gb AAB58955.1  cytochrome b [Homo sapiens] {SUB 1-378} >gb AAA31851.1  cytochrome b [Homo s	emb CAA2403 8.1	6314	512	829	71	72	HSDJY15	Uni-ZAP XR
2038	893842			6315	86	388			HSAAR81	pBluescript SK-
2039	893866	secretory protein [Homo sapiens] >gb AAA83628.1  intestinal trefoil factor [Homo sapiens] >pir A48284 A48284 intestinal trefoil factor 3 precursor - human >sp Q07654 ITF_HUMAN INTESTINAL TREFOIL FACTOR PRECURSOR (HP1.B). Length = 80	gb AAA59981. 1	6316	41	436	78	78	HNDAD16	pCMVSPORT 2.0
2040	893867	secretory protein [Homo sapiens] >gb AAA83628.1  intestinal trefoil factor [Homo sapiens] >pir A48284 A48284 intestinal trefoil factor 3 precursor - human >sp Q07654 ITF_HUMAN INTESTINAL TREFOIL FACTOR PRECURSOR (HP1.B). Length = 80	gb AAA59981. 1	6317	2	316	78	78	HCNSE58	pBluescript
2041	894012	(AF023259) RNA-binding protein [Homo sapiens] >gb AAC63910.1  (AF023259) RNA-binding protein [Homo sapiens] >sp O75876 O75876 RNA- BINDING PROTEIN. Length = 411	gb AAC63910. 1	6318	51	257	98	100	HSVCD79	Uni-ZAP XR
2042	894051			6319	23	310			HSIFA27	Uni-ZAP XR
2043	894121	ubiquitin carrier protein E2 - human >gb AAA58446.1  ubiquitin carrier protein [Homo sapiens] {SUB 23-247} Length = 247	pir B42856 B4 2856	6320	1	855	87	87	HTTKV46	Uni-ZAP XR



2044	894341	homeodomain protein [Gallus gallus] >pir B37914 B37914 homeotic protein Chox-4e - chicken (fragment) {SUB 7-99} >pir S14938 S14938 homeotic protein Hox D11 - human (fragment) {SUB 27-92} Length = 99	dbj BAA01133 .1	6321	3	122	100	100	HHGCE29	Lambda ZAP II
2045	894397	(AB037134) IRE homolog 1 [Arabidopsis thaliana] >sp BAA89784 BAA89784 IRE homolog 1 (fragment). Length = 1023	dbj BAA89784 .1	6322	2	355	54	72	HCYBE73	pBluescript SK-
2046	894631	(AL122098) hypothetical protein [Homo sapiens] >emb CAB59266.1 (AL122098) hypothetical protein [Homo sapiens] >pir T34532 T34532 hypothetical protein DKFZp434B1517.1 - human (fragment) >sp CAB59266 CAB59266 Hypothetical 71.5 kd protein (fragment). Length	emb CAB5926 6.1	6323	54	1268	86	86	HWLVS05	pSport1
2047	894806			6324	70	411			HCRMV27	pSport1
2048	894811			6325	381	620			HCROI22	pSport1
2049	894818			6326	1	102			HCQAF06	Lambda ZAP II
2050	894820	similar to [SwissProt Accession Number P23842]; start codon is not identified yet [Escherichia coli] >sp P76954 P76954 YFEA PROTEIN (FRAGMENT). Length = 771	dbj BAA16267 .1	6327	373	576	100	100	HKCSA83	pBluescript
2051	894824			6328	77	3			HSBAI04	pBluescript SK-
2052	894827			6329	253	570			HCQCD80	Lambda ZAP II
2053	894830	(AB005289) ABC transporter 7 protein [Homo sapiens] >sp O75027 ABC7_HUMAN ATP- BINDING CASSETTE TRANSPORTER 7 PRECURSOR (ABC TRANSPORTER 7 PROTEIN). Length = 752	dbj BAA28861 .1	6330	244	684	99	99	HCQCF52	Lambda ZAP II

2054	894831	(AF072816) ABC-type transporter MRP3 [Rattus norvegicus] >sp O88563 MRP3_RAT CANALICULAR MULTISPECIFIC ORGANIC ANION TRANSPORTER 2 (MULTIDRUG RESISTANCE-ASSOCIATED PROTEIN 3) (MRP-LIKE PROTEIN-2) (MLP-2). Length = 1522	gb AAC25416.1	6331	314	841	48	64	HCQDE22	Lambda ZAP II
2055	894832			6332	2	388			HWLVU33	pSport1
2056	894842			6333	2856	3134			HAJAY88	pCMVSPORT 3.0
2057	894878			6334	3	230			HCRPM46	pSport1
2058	895122	MAP3K delta-1 protein kinase [Arabidopsis thaliana] >sp O23719 O23719 MAP3K DELTA-1 PROTEIN KINASE (FRAGMENT). Length = 406	emb CAA7459.1.1	6335	3	1049	39	58	HOEOQ19	Uni-ZAP XR
2059	895303	(AK000385) unnamed protein product [Homo sapiens] Length = 152	dbj BAA91131.1	6336	1468	1662	76	81	HKGBP52	pSport1
2060	895372			6337	321	632			HOUHL17	Uni-ZAP XR
2061	895675			6338	1873	2310			HDPPB40	pCMVSPORT 3.0
2062	895781			6339	337	552			HWLOI29	pSport1
2063	895927	(AB027466) spondin 2 [Homo sapiens] >sp BAA85892 BAA85892 Spondin 2. Length = 331	dbj BAA85892.1.1	6340	112	1266	91	91	HCRMJ47	pSport1
2064	896008	ribosomal protein L7a large subunit [Homo sapiens] >emb CAA36383.1  L7a protein [Homo sapiens] >emb CAA29889.1  PLA-X polypeptide [Homo sapiens] >emb CAA43925.1  ribosomal protein L7a [Homo sapiens] >emb CAA33117.1  ribosomal protein L7a (AA 1-266) [Rattus	gb AAA60282.1	6341	2	373	87	87	HLDXE66	pSport1
2065	897234			6342	117	446			HAIBM54	Uni-ZAP XR

2066	897524	unnamed protein product [Homo sapiens] >emb CAA93157.1  translocon-associated protein delta subunit precursor [Homo sapiens] >emb CAA92215.1  translocon-associated protein delta subunit precursor [Homo sapiens] >gb AAC51745.1  translocon-associated protei	emb CAA6221 1.1	6343	3	680	100	100	HSXAX45	Uni-ZAP XR
2067	897898	(AJ243320) hypothetical protein [Canis familiaris] >sp Q9XSV3 Q9XSV3 HYPOTHETICAL 20.0 KD PROTEIN. Length = 181	emb CAB4586 4.1	6344	3	707	30	47	HE8PB56	Uni-ZAP XR
2068	898087	(AF072128) claudin-2 [Mus musculus] >sp O88552 CLD2_MOUSE CLAUDIN-2. Length = 230	gb AAC27079. 1	6345	1	264	87	91	H7PGE66	Uni-ZAP XR
2069	898136			6346	190	504			HWLIL19	pSport1
2070	898157	novel ORF [Homo sapiens] >sp O00251 O00251 HYPOTHETICAL PROTEIN (FRAGMENT). Length = 68	gb AAB72234. 1	6347	688	1002	88	88	HPJEE80	Uni-ZAP XR
2071	898192			6348	111	353			HWLQX67	pSport1
2072	898355	beta-galactosidase [Expression vector pBSII- LUCINT] Length = 69	gb AAB53629. 1	6349	1810	2109	94	98	HCRNK75	pSport1
2073	898418	(AC003965) SP001LA [Homo sapiens] Length = 271	gb AAB93671. 1	6350	2	694	82	84	HOGDR01	pCMVSPORT 2.0
2074	898427	reticulocalbin [Homo sapiens] >emb CAB53067.1  (AL078612) dJ65P5.1 (reticulocalbin 1, EF-hand calcium binding domain) [Homo sapiens] >pir C4173 C4173 reticulocalbin precursor - human >sp Q15293 RCN1_HUMAN RETICULOCALBIN 1 PRECURSOR. >sp CAB53067 CAB5306	dbj BAA07670 .1	6351	298	1017	64	78	HHATR06	pCMVSPORT 3.0
2075	898541	(AF169677) leucine-rich repeat transmembrane protein FLRT3 [Homo sapiens] >sp AAF28461 AAF28461 Leucine-rich repeat transmembrane protein FLRT3. Length = 649	gb AAF28461. 1 AF1696	6352	424	1938	90	90	HLQDM07	Lambda ZAP II

2076	898651	(AF126484) CARD4 [Homo sapiens] >gb AAD28350.1 AF113925_1 (AF113925) Nod1 [Homo sapiens] >gb AAD43922.1 (AF149774) NOD1 protein [Homo sapiens] >sp Q9Y239 Q9Y239 NOD1 PROTEIN. Length = 953	gb AAD29125.1 AF1264	6353	605	2761	91	91	HDPBW68	pCMVSPORT 3.0
2077	898814	(AF117754) thyroid hormone receptor-associated protein complex component TRAP240 [Homo sapiens] >sp AAD22032 AAD22032 Thyroid hormone receptor-associated protein complex component TRAP240. >dbj BAA25519.1  (AB011165) KIAA0593 protein [Homo sapiens] {SUB 1	gb AAD22032.1	6354	1	2187	86	86	HISCJ15	pSport1
2078	898946	(AF081886) ERO1-like protein [Homo sapiens] >gb AAF06104.1 AF123887_1 (AF123887) ERO1L [Homo sapiens] {SUB 84-468} Length = 468	gb AAF35260.1 AF0818	6355	1	1656	100	100	HCYBH77	pBluescript SK-
2079	899130	(AF117892) aspartic-like protease [Homo sapiens] >gb AAD45963.1 AF050171_1 (AF050171) aspartyl protease [Homo sapiens] >gb AAF17078.1  (AF200342) aspartyl protease 1 [Homo sapiens] >gb AAF26368.1 AF204944_1 (AF204944) transmembrane aspartic proteinase Asp	gb AAD45240.1	6356	3	1445	92	92	HPJAS61	Uni-ZAP XR
2080	899224	COLLAGEN ALPHA 1(I) CHAIN PRECURSOR. >emb CAA67261.1 collagen type I alpha 1 [Homo sapiens] {SUB 1-1069} >emb CAA29605.1 C- terminal propeptide domain [Homo sapiens] {SUB 1229-1454} Length = 1464	sp P02452 CA 1 _HUMAN	6357	1308	2630	94	94	HCRMK25	pSport1

2081	899632	unnamed protein product [unidentified] >pir A26359 A26359 decay-accelerating factor splice form 1 precursor - human >dbj BAA22900.1  (AB003312) decay accelerating factor [Homo sapiens] {SUB 291-345} Length = 440	emb CAA0384 0.1	6358	3	1376	87	87	HNTRV11	pSport1
2082	899644	lac repressor [Cloning vector pCMVlac] >gb AAC73448.1  (AE000141) transcriptional repressor of the lac operon [Escherichia coli] {SUB 1-360} >gb AAB61949.1  lac repressor fragment [unidentified cloning vector] {SUB 331-360} >gb AAA72793.1  lacI [unidenti	gb AAB17268. 1	6359	3	401	96	97	HWLOU33	pSport1
2083	899661	(AL050297) hypothetical protein [Homo sapiens] >emb CAB43396.1  (AL050297) hypothetical protein [Homo sapiens] >pir T08701 T08701 hypothetical protein DKFZp564N123.1 - human (fragment) >sp Q9Y3T6 Q9Y3T6 HYPOTHETICAL 50.0 KD PROTEIN (FRAGMENT). Length = 45	emb CAB4339 6.1	6360	21	1016	90	91	HAPNO50	Uni-ZAP XR
2084	899776	formate dehydrogenase [Escherichia coli] Length = 715	gb AAA23754. 1	6361	619	1392	99	99	HBSAK60	Uni-ZAP XR
2085	899866	artifact-warming sequence (translated ALU class F) - human Length = 673	pir F40201 F40 201	6362	88	201	59	70	HDPOD73	pCMV Sport 3.0
2086	899885	SDF2 [Homo sapiens] >pir JC5106 JC5106 stromal cell-derived factor 2 precursor - human >sp Q99470 Q99470 SDF2. Length = 211	dbj BAA09312 .1	6363	233	928	91	92	HWHHQ57	pCMV Sport 3.0
2087	899913	(AB012223) ORF2 [Canis familiaris] >sp O62658 O62658 LINE-1 ELEMENT ORF2. Length = 1275	dbj BAA23253 .1	6364	238	92	36	59	HNIFHY51	Uni-ZAP XR
2088	900015			6365	1	222			HTOHV42	Uni-ZAP XR
2089	900162	(AF157106) soluble secreted endopeptidase delta [Mus musculus] >sp AAF13153 AAF13153 Soluble secreted endopeptidase delta. Length = 742	gb AAF13153. 1 AAF1571	6366	367	753	82	94	HWLXO02	pSport1

2090	900249	(AC006950) IgG Fc binding protein [AA 4671-5405] [Homo sapiens] >sp Q95784 Q95784 IGG FC BINDING PROTEIN (FRAGMENT). Length = 735	gb AAD15624.1	6367	3	1409	93	93	HWLKM77	pSport1
2091	900555	(AL133620) hypothetical protein [Homo sapiens] >emb CAB63746.1  (AL133620) hypothetical protein [Homo sapiens] >sp CAB63746 CAB63746 Hypothetical 115.3 kd protein. Length = 1031	emb CAB63746.1	6368	29	2143	97	97	HWMCI06	pSport1
2092	900696	(AF175522) transmembrane tryptase [Homo sapiens] >gb AAF03697.1 AF175759_1 (AF175759) transmembrane tryptase [Homo sapiens] >sp AAF03695 AAF03695 Transmembrane tryptase. >sp AAF03697 AAF03697 Transmembrane tryptase. Length = 321	gb AAF03695.1 AF1755	6369	21	902	47	57	HCRPZ48	pSport1
2093	900777	Similar to S.cerevisiae EMP70 protein precursor (S25110) [Homo sapiens] >sp Q92544 Q92544 MYELOBLAST KIAA0255. Length = 625	dbj BAA13385.1	6370	611	1492	84	84	HCRMU04	pSport1
2094	900784	(AF106037) adipocyte-derived leucine aminopeptidase [Homo sapiens] >sp AAF07395 AAF07395 Adipocyte-derived leucine aminopeptidase. Length = 941	gb AAF07395.1 AF1060	6371	250	3081	94	95	HHBEA82	pCMVSPORT1
2095	900838	frizzled protein-2 - human Length = 295	pir JE0174 JE0174	6372	2	1132	97	97	HWHGX93	pCMVSPORT3.0
2096	900919	(AF020797) AP-mu chain family member mu1B [Homo sapiens] >sp Q9Y6Q5 Q9Y6Q5 AP-MU CHAIN: FAMILY MEMBER MU1B. Length = 423	gb AAD25870.1 AF0207	6373	3	1328	99	99	HTNAI80	pBluescript SK-

2097	900966	(AL117507) hypothetical protein [Homo sapiens] >emb CAB55969.1 (AL117507) hypothetical protein [Homo sapiens] >pir T17279 T17279 hypothetical protein DKFZp434F1935.1 - human >sp CAB55969 CAB55969 Hypothetical 39.2 kd protein. >emb CAA29963.1 hU1-70K pro	emb CAB5596 9.1	6374	1784	2824	64	64	HCRPO45	pSport1
2098	900991	(AF077030) hypothetical 43.2 kDa protein [Homo sapiens] >gb AAD34049.1 AF151812_1 (AF151812) CGI-54 protein [Homo sapiens] >sp Q9Y282 Q9Y282 CGI-54 PROTEIN. Length = 383	gb AAD27763. 1 AF0770	6375	1	1230	96	96	HWLWF60	pSport1
2099	900993	(AF147790) transmembrane mucin 12 [Homo sapiens] >sp AAD55678 AAD55678 Transmembrane mucin 12 (fragment). Length = 585	gb AAD55678. 1 AF1477	6376	3	1619	84	86	HCNCY58	Lambda ZAP II
2100	901111	(AF061022) CTH [Homo sapiens] >sp O95791 O95791 CTH. Length = 325	gb AAD17522. 1	6377	3	1097	84	85	HCNDA61	Lambda ZAP II
2101	901125	(AF127036) calcium-activated chloride channel protein 1 [Homo sapiens] >sp AAD25487 AAD25487 Calcium-activated chloride channel protein 1. Length = 914	gb AAD25487. 1 AF1270	6378	23	2629	96	96	HCNUB65	pBluescript
2102	901128	(AB002362) KIAA0364 [Homo sapiens] >gb AAC52057.1 (AF034198) IGSF1 [Homo sapiens] >pir T09402 T09402 immunoglobulin-like protein IGSF1 - human >sp O15070 O15070 KIAA0364. Length = 1327	dbj BAA20819 .1	6379	2	826	42	57	HWLRB02	pSport1
2103	901202	(AJ245620) CTL1 protein [Homo sapiens] Length = 654	emb CAB7554 1.1	6380	86	2209	93	93	HSDKL35	Uni-ZAP XR
2104	901253	GalNAc alpha-2,6-sialyltransferase I [Mus musculus] >sp CAA72137 CAA72137 GalNAc alpha-2,6- sialyltransferase I. Length = 526	emb CAA7213 7.1	6381	31	1905	65	73	HJPCX37	Uni-ZAP XR
2105	901276	(AB023172) KIAA0955 protein [Homo sapiens] >sp Q9Y2G2 Q9Y2G2 KIAA0955 PROTEIN. Length = 431	dbj BAA76799 .1	6382	259	1155	98	99	HPBEM10	pBluescript SK-

2106	901333	(AF201951) high affinity immunoglobulin epsilon receptor beta subunit [Homo sapiens] Length = 240	gb AAF17243.1 AF2019	6383	470	1288	35	49	HWBDL33	pCMVSPORT 3.0
2107	901375	regenerating protein I [Mus musculus] >pir A47148 A47148 reg I, regenerating islet cells - mouse >sp P43137 LIT1_MOUSE LITHOSTATHINE 1 PRECURSOR (PANCREATIC STONE PROTEIN 1) (PSP) (PANCREATIC THREAD PROTEIN 1) (PTP) (ISLET OF LANGERHANS REGENERATING PROTEIN)	dbj BAA03111.1	6384	172	669	36	60	H2LBA47	pBluescript SK-
2108	901415	(AF007791) secreted cement gland protein XAG-2 homolog [Homo sapiens] >gb AAC82614.1  (AF038451) secreted cement gland protein XAG-2 homolog [Homo sapiens] >gb AAF22484.1 AF088867_1 (AF088867) putative secreted protein XAG [Homo sapiens] >pir JE0350 JE035	gb AAC77358.1	6385	2	607	100	100	HCQA172	Lambda ZAP II
2109	901421	(AF125543) major histocompatibility complex class I protein [Monodelphis domestica] >sp A.F02448 AAF02448 Major histocompatibility complex class I protein. Length = 347	gb AAF02448.1 AF1255	6386	67	819	29	46	HETHC61	Uni-ZAP XR
2110	901472	predicted using Genefinder; Similarity to Mouse FK506-binding protein (SW:FKB3_MOUSE) [Caenorhabditis elegans] >pir T21882 T21882 hypothetical protein F36H1.1 - Caenorhabditis elegans >sp Q20107 Q20107 F36H1.1 PROTEIN. Length = 139	emb CAA9299.4.1	6387	2	724	52	71	HTXLJ25	Uni-ZAP XR
2111	901473	2.19 [Homo sapiens] >emb CAA39090.1 2.19 protein [Homo sapiens] >gb AAA92652.1 2.19 [Homo sapiens] >pir J37095 J37095 gene 2.19 protein - human >sp P98173 P98173 HUMAN 2.19 PROTEIN PRECURSOR. Length = 230	emb CAA6064.5.1	6388	3	671	62	80	HCNA122	Lambda ZAP II



2112	901494	(AB006781) galectin-4 [Homo sapiens] >gb AAB86590.1  galectin-4 [Homo sapiens] >gb AAC51763.1  (AF014838) galectin-4 [Homo sapiens] >sp P56470 LEG4_HUMAN GALECTIN-4 (LACTOSE-BINDING LECTIN 4) (L-36 LACTOSE-BINDING PROTEIN) (L36LBP). >sp AAB86590 AAB86590	dbj BAA22165.1	6389	2	805	92	92	HSIAL77	Uni-ZAP XR
2113	901515	pre-pump-1 proteinase (AA -17 to 250) [Homo sapiens] >emb CAA77942.1  PUMP [Homo sapiens] >pir B28816 KCHUM matrilysin (EC 3.4.24.23) precursor - human >sp P09237 COG7_HUMAN MATRILYSIN PRECURSOR (EC 3.4.24.23) (PUMP-1 PROTEASE) (UTERINE METALLOPROTEINASE)	emb CAA3067.8.1	6390	3	839	100	100	HRACJ32	pCMVSPORT 3.0
2114	901567	(AK001466) unnamed protein product [Homo sapiens] Length = 202	dbj BAA91708.1	6391	2	736	92	92	HMGBJ25	Uni-ZAP XR
2115	901578	G PROTEIN-COUPLED RECEPTOR CKR-L2 [Homo sapiens] >sp O15185 O15185 G PROTEIN-COUPLED RECEPTOR CKR-L2. Length = 415	emb CAB0214.3.1	6392	2	1417	80	80	HDTEO10	pCMVSPORT 2.0
2116	901621	(AL031685) dJ963K23.2 (novel protein) [Homo sapiens] >sp Q9Y508 Q9Y508 DJ963K23.2 (NOVEL PROTEIN) (FRAGMENT). Length = 228	emb CAB4602.8.1	6393	2	694	94	94	HSSGC06	Uni-ZAP XR
2117	901875	GalNAc alpha-2,6-sialyltransferase I [Mus musculus] >sp CAA72137 CAA72137 GalNAc alpha-2,6-sialyltransferase I. Length = 526	emb CAA7213.7.1	6394	32	1906	67	75	HSICN14	Uni-ZAP XR
2118	HWLMO73R	!!!! ALU SUBFAMILY SQ WARNING ENTRY !!!! Length = 593	sp P39194 ALU7_HUMAN	6395	2	496	81	86	HWLMO73	pSport1
2119	HCRMU56R	!!!! ALU SUBFAMILY SX WARNING ENTRY !!!! Length = 591	sp P39195 ALU8_HUMAN	6396	25	129	75	77	HCRMU56	pSport1

2120	HWLRH49R	"TFIIA-42" [Homo sapiens] >emb CAA53151.1  TFIIA [Homo sapiens] >emb CAA54442.1  TFIIA/alpha, p55 [Homo sapiens] >gb AAF26776.1 AC010582_2 (AC010582) TFIIA-42 [Homo sapiens] >gb AAF26776.1 AC010582_2 (AC010582) TFIIA-42 [Homo sapiens] >pir A49077 A49077	dbj BAA03604.1	6397	2	115	75	75	HWLRH49	pSport1
2121	HKCSA70R	(AB000911) ribosomal protein [Sus scrofa] >emb CAB56794.1  ribosomal protein S18 [Homo sapiens] >emb CAA20231.1  (AL031228) dJ1033B10.4 (40S ribosomal protein S18 (RPS18, KE-3)) [Homo sapiens] >gb AAA16795.1  ribosomal protein [Mus musculus] >emb CAA40750	dbj BAA19211.1	6398	1	159	100	100	HKCSA70	pBluescript
2122	HWLOB10R	(AB001428) motor domain of KIF12 [Mus musculus] >sp O35061 O35061 MOTOR DOMAIN OF KIF12 (FRAGMENT). Length = 169	dbj BAA22388.1	6399	2	163	93	95	HWLOB10	pSport1
2123	HCQCG26R	(AB002303) KIAA0305 [Homo sapiens] >sp O15023 O15023 KIAA0305. Length = 1539	dbj BAA20764.1	6400	1	219	98	98	HCQCG26	Lambda ZAP II
2124	HCRNR57R	(AB002304) KIAA0306 [Homo sapiens] >sp BAA20765 BAA20765 KIAA0306 protein (fragment). Length = 1451	dbj BAA20765.1	6401	1	303	95	95	HCRNR57	pSport1
2125	HWLUZ40R	(AF152961) chromatin-specific transcription elongation factor FACT 140 kDa subunit [Homo sapiens] >sp Q9Y5B9 Q9Y5B9 CHROMATIN-SPECIFIC TRANSCRIPTION ELONGATION FACTOR FACT 140 KDA SUBUNIT. >gb AAF28231.1  (AF164924) SPT16/CDC68-like protein [Homo sapiens]	gb AAD43978.1 AF1529	6402	2	313	79	79	HWLUZ40	pSport1
2126	H6EBJ04R			6403	332	129			H6EBJ04	Uni-ZAP XR
2127	HOENF69R	(AB011180) KIAA0608 protein [Homo sapiens] >sp O60347 O60347 KIAA0608 PROTEIN (FRAGMENT). Length = 775	dbj BAA25534.1	6404	1	264	43	46	HOENF69	Uni-ZAP XR

2128	HCQDC8IR	(AB012725) zinc finger protein [Mus musculus] >sp O88291 O88291 ZINC FINGER PROTEIN. Length = 580	dbj BAA31522 .1	6405	169	393	76	80	HCQDC81 II	Lambda ZAP II
2129	HWLQY33R	(AB014519) KIAA0619 protein [Homo sapiens] >sp O75116 O75116 KIAA0619 PROTEIN. Length = 1388	dbj BAA31594 .1	6406	197	382	95	95	HWLQY33	pSport1
2130	HCRNF08R	hypothetical protein KIAA0684 - human (fragment) >sp O75169 O75169 KIAA0684 PROTEIN (FRAGMENT). Length = 903	pir T00358 T0 0358	6407	2	145	79	82	HCRNF08	pSport1
2131	HKCSZ69R	scar protein [Homo sapiens] Length = 244	gb AAA36597. 1	6408	2	313	98	98	HKCSZ69	pBluescript
2132	HCQAG23R	(AB018335) KIAA0792 protein [Homo sapiens] >sp O94886 O94886 KIAA0792 PROTEIN. Length = 807	dbj BAA34512 .1	6409	149	295	92	94	HCQAG23	Lambda ZAP II
2133	HCRQD03R	immunoglobulin heavy chain [Homo sapiens] Length = 152	gb AAA69736. 1	6410	1	573	66	75	HCRQD03	pSport1
2134	H2LAF75R	IDN4-GGTR14 PROTEIN. >dbj BAA77334.1  (AB019493) IDN4-GGTR9 [Homo sapiens] {SUB 57-414} >emb CAA22908.1  (AL035303) hypothetical protein [Homo sapiens] {SUB 159-414} Length = 414	sp Q9Y6Y5 Q9 Y6Y5	6411	19	180	96	96	H2LAF75	pBluescript SK-
2135	H2LAJ65R			6412	1	159			H2LAJ65	pBluescript SK-
2136	H2LAT73R	IDN4-GGTR14 PROTEIN. >dbj BAA77334.1  (AB019493) IDN4-GGTR9 [Homo sapiens] {SUB 57-414} >emb CAA22908.1  (AL035303) hypothetical protein [Homo sapiens] {SUB 159-414} Length = 414	sp Q9Y6Y5 Q9 Y6Y5	6413	2	202	96	96	H2LAT73	pBluescript SK-
2137	H2LAX35R	(AJ005324) glutamate permease [synthetic construct] >emb CAA06474.1  (AJ005327) glutamate permease [synthetic construct] >emb CAA06477.1  (AJ005330) glutamate permease [synthetic construct] >gb AAA24514.1  gltS [Escherichia coli] {SUB 437- 459} Length = 45	emb CAA0647 1.1	6414	1	150	93	93	H2LAX35	pBluescript SK-

2138	H2LAX79R	IDN4-GGTR14 PROTEIN. >dbj BAA77334.1  (AB019493) IDN4-GGTR9 [Homo sapiens] {SUB 57-414} >emb CAA22908.1 (AL035303) hypothetical protein [Homo sapiens] {SUB 159-414} Length = 414	sp Q9Y6Y5 Q9Y6Y5	6415	3	158	96	96	H2LAX79	pBluescript SK-
2139	HCYBK85R			6416	11	127			HCYBK85	pBluescript SK-
2140	HCYBK96R	IDN4-GGTR14 PROTEIN. >dbj BAA77334.1  (AB019493) IDN4-GGTR9 [Homo sapiens] {SUB 57-414} >emb CAA22908.1 (AL035303) hypothetical protein [Homo sapiens] {SUB 159-414} Length = 414	sp Q9Y6Y5 Q9Y6Y5	6417	2	154	87	87	HCYBK96	pBluescript SK-
2141	HCYBL18R	IDN4-GGTR14 PROTEIN. >dbj BAA77334.1  (AB019493) IDN4-GGTR9 [Homo sapiens] {SUB 57-414} >emb CAA22908.1 (AL035303) hypothetical protein [Homo sapiens] {SUB 159-414} Length = 414	sp Q9Y6Y5 Q9Y6Y5	6418	1	120	80	86	HCYBL18	pBluescript SK-
2142	HCYBM62R	IDN4-GGTR14 PROTEIN. >dbj BAA77334.1  (AB019493) IDN4-GGTR9 [Homo sapiens] {SUB 57-414} >emb CAA22908.1 (AL035303) hypothetical protein [Homo sapiens] {SUB 159-414} Length = 414	sp Q9Y6Y5 Q9Y6Y5	6419	1	123	75	80	HCYBM62	pBluescript SK-
2143	HCYBO61R	IDN4-GGTR14 PROTEIN. >dbj BAA77334.1  (AB019493) IDN4-GGTR9 [Homo sapiens] {SUB 57-414} >emb CAA22908.1 (AL035303) hypothetical protein [Homo sapiens] {SUB 159-414} Length = 414	sp Q9Y6Y5 Q9Y6Y5	6420	2	112	100	100	HCYBO61	pBluescript SK-
2144	HTXPR08R	(AB020670) KIAA0863 protein [Homo sapiens] >sp O94943 O94943 KIAA0863 PROTEIN. Length = 1131	dbj BAA74886.1	6421	2	88	100	100	HTXPR08	Uni-ZAP XR

2145	HUUAQ45R	(AB021288) beta 2-microglobulin [Homo sapiens] >gb AA87972.1  beta-2-microglobulin [Pan troglodytes] >gb AA88008.1  beta-2-microglobulin [Gorilla gorilla] >gb AAD48083.1  (AF072097) beta- 2 microglobulin [Homo sapiens] >pir A90976 MIGHUB2 beta-2-microglob	dbj BAA35182 .1	6422	68	322	78	78	HUUAQ45	pSport1
2146	HWLWQ51R	(AB023191) KIAA0974 protein [Homo sapiens] >sp Q9Y2I0 Q9Y2I0 KIAA0974 PROTEIN (FRAGMENT). Length = 565	dbj BAA76818 .1	6423	2	517	73	76	HWLWQ51	pSport1
2147	HKLAB44R	(AB023210) KIAA0993 protein [Homo sapiens] >sp Q9Y2J7 Q9Y2J7 KIAA0993 PROTEIN (FRAGMENT). Length = 364	dbj BAA76837 .1	6424	3	389	82	84	HKLAB44	Lambda ZAP II
2148	H2CBA06R	(AB023222) KIAA1005 protein [Homo sapiens] >sp Q9Y2K8 Q9Y2K8 KIAA1005 PROTEIN (FRAGMENT). Length = 1055	dbj BAA76849 .1	6425	1	354	100	100	H2CBA06	pBluescript SK-
2149	HWLRL41R	(AB028624) mitochondrial ATP Synthase subunit e [Homo sapiens] >sp Q9Y6W4 Q9Y6W4 MITOCHONDRJAL ATP SYNTHASE SUBUNIT E (FRAGMENT). Length = 66	dbj BAA78778 .1	6426	2	154	94	100	HWLRL41	pSport1
2150	HCNAH60R	(AC002301) Homolog of rat Zymogen granule membrane protein [Homo sapiens] >sp O60844 O60844 HOMOLOG OF RAT ZYMOGEN GRANULE MEMBRANE PROTEIN. Length = 167	gb AAC08708 .1	6427	2	325	80	81	HCNAH60	Lambda ZAP II
2151	HCNDF58R	(AC002301) Homolog of rat Zymogen granule membrane protein [Homo sapiens] >sp O60844 O60844 HOMOLOG OF RAT ZYMOGEN GRANULE MEMBRANE PROTEIN. Length = 167	gb AAC08708 .1	6428	62	328	82	86	HCNDF58	Lambda ZAP II

2152	HCRMZ60R	(AC002483) putative product from mRNA sequence CG003 from BRCA2 region; match to U50534 (NID:g1685103) [Homo sapiens] >pir T00415 T00415 hypothetical protein H_248O15.1 - human (fragment) >sp O14572 O14572 WUGSC:H_248O15.1 PROTEIN (FRAGMENT). Length = 184	gb AAC35295.1	6429	2	544	67	79	HCRMZ60	pSport1
2153	HCRNL13R	(AC002563) putative RHO/RAC effector protein; 95% similarity to P49205 (PID:g1345860) [Homo sapiens] >sp O14578 CTRO_HUMAN CITRON PROTEIN (FRAGMENT). >dbj BAA76793.1  (AB023166) KIAA0949 protein [Homo sapiens] {SUB 347-1286} Length = 1286	gb AAB71327.1	6430	3	236	98	100	HCRNL13	pSport1
2154	HCRMX17R	(AC003082) R27945_2 [Homo sapiens] >sp O43338 O43338 R27945_2. Length = 475	gb AAC24607.1	6431	19	204	51	65	HCRMX17	pSport1
2155	HWMBJ68R	(AL109657) dJ842G6.1 (novel protein) [Homo sapiens] >sp CAB65791 CAB65791 DJ842G6.1 (novel protein) (fragment). Length = 197	emb CAB65791.1	6432	3	218	100	100	HWMBJ68	pSport1
2156	HWLOV91R	(AC004475) F23858_1 [Homo sapiens] >pir T02299 T02299 hypothetical protein F23858_1 - human (fragment) >sp O60378 O60378 F23858_1 (FRAGMENT). >emb CAB70678.1  (AL137286) hypothetical protein [Homo sapiens] {SUB 217-608} Length = 608	gb AAC08052.1	6433	3	455	66	66	HWLOV91	pSport1
2157	HCRPW27R	(AC004528) R32184_3 [Homo sapiens] >sp O60392 O60392 R32184_3. Length = 529	gb AAC12681.1	6434	3	314	96	96	HCRPW27	pSport1
2158	HELGR96R	APP-binding protein 1 [Rattus norvegicus] >sp Q9Z1A5 Q9Z1A5 APP-BINDING PROTEIN 1. Length = 534	gb AAD09247.1	6435	1	249	75	79	HELGR96	Uni-ZAP XR
2159	HCRPB14R			6436	2	79			HCRPB14	pSport1
2160	HCRQM72R			6437	273	1			HCRQM72	pSport1
2161	HWLNK47R			6438	343	2			HWLNK47	pSport1

2162	HWLOI40R	unnamed protein product [unidentified] Length = 180	emb CAB6919 5.1	6439	403	212	86	93	HWLOI40	pSport1
2163	HWLMH52R	(AL096881) hypothetical protein [Homo sapiens] >gb AAFI19256.1 AC004832_1 (AC004832) similar to 45 kDa secretory protein [Rattus norvegicus]; similar to CAA10644.1 (PID:g4164418) [Homo sapiens] >sp O76054 O76054 HYPOTHETICAL 46.1 KD PROTEIN. >sp AAFI19256 A	emb CAB5140 5.1	6440	3	245	100	100	HWLMH52	pSport1
2164	H2CBU03R	(AB033044) KIAA1218 protein [Homo sapiens] >sp BAA86532 BAA86532 KIAA1218 protein (fragment). Length = 864	dbj BAA86532 .1	6441	3	353	96	96	H2CBU03	pBluescript SK-
2165	HWLUL19R	(AC005154) similar to protein U28928 (PID:g861306) [Homo sapiens] >sp O75223 O75223 WUGSC:H_DJ0777023.1 PROTEIN. Length = 188	gb AAC23790. 1	6442	2	211	59	62	HWLUL19	pSport1
2166	HCQDR91R	(AL117583) hypothetical protein [Homo sapiens] >emb CAB56005.1 (AL117583) hypothetical protein [Homo sapiens] >pir T17315 T17315 hypothetical protein DKFZp434K058.1 - human >sp CAB56005 CAB56005 Hypothetical 12.7 kd protein. Length = 117	emb CAB5600 5.1	6443	385	146	90	90	HCQDR91	Lambda ZAP II
2167	HWMBN34R	(AC006153) similar to Aquifex aeolicus GTP- binding protein; similar to AE000771 (PID:g2984292) [Homo sapiens] >sp Q9Y6T6 Q9Y6T6 WUGSC:H_NH0120J02.1 PROTEIN (FRAGMENT). Length = 206	gb AAD15550. 1	6444	2	388	100	100	HWMBN34	pSport1
2168	HWMBN34R	(AC007228) BC37295_1 [Homo sapiens] >sp Q9Y2N9 Q9Y2N9 BC37295_1. Length = 599	gb AAD23607. 1 AC0072	6445	22	426	65	74	HWMBN34	pSport1

2169	HKCSCI4R	(AE000227) putative amino acid/amine transport protein [Escherichia coli] >pir C64878 C64878 >sp P76037 YCJJ_ECOLI_HYPOTHETICAL_50.9 KD TRANSPORT PROTEIN IN SAPA-ALDH INTERGENIC REGION. {SUB 19-479} >db	gb AAC74378.1	6446	427	14	68	70	HKCSCI4	pBluescript
2170	HCRNF81R	(AF000364) heterogeneous nuclear ribonucleoprotein R [Homo sapiens] >pir T02673 T02673 heterogeneous nuclear ribonucleoprotein R - human >sp O43390 O43390 HETEROGENEOUS NUCLEAR RIBONUCLEOPROTEIN R. Length = 633	gb AAC39540.1	6447	1	591	88	90	HCRNF81	pSport1
2171	HOHC131R	(AF000381) non-functional folate binding protein [Homo sapiens] >sp O14597 O14597 NON-FUNCTIONAL FOLATE BINDING PROTEIN. Length = 254	gb AAB81938.1	6448	521	327	57	62	HOHC131	pCMVSPORT 2.0
2172	HSKKC10R	(AF000608) p41-Arc [Homo sapiens] >gb A-AF03508.1 AC004922_5 (AC004922) P41-ARC [Homo sapiens] >sp O15143 AR41_HUMAN ARP2/3 COMPLEX 41 KD SUBUNIT (P41-ARC). >sp A-AF03508 A-AF03508 P41-ARC. Length = 372	gb AAB64189.1	6449	34	213	72	77	HSKKC10	pBluescript
2173	HWLWU01R	(AF006621) embryonic lung protein [Homo sapiens] >sp Q9Y6R2 Q9Y6R2 EMBRYONIC LUNG PROTEIN. Length = 568	gb AAB87763.1	6450	1	246	95	95	HWLWU01	pSport1
2174	HCQDS79R	(AF007157) [Homo sapiens] >sp O43414 O43414 HYPOTHETICAL 43.1 KD PROTEIN (FRAGMENT). >gb AAC04618.1 (AC004254) similar to C. elegans hypothetical protein; similar to AF038615 (PID:g2736329) [Homo sapiens] {SUB 224-312} >emb CAB55430.1 (AL035417)	gb AAC19158.1	6451	80	571	85	92	HCQDS79	Lambda ZAP II
2175	H2CBCS2R			6452	50	370			H2CBCS2	pBluescript SK-



2176	HWLWU22R	(AF012023) integrin cytoplasmic domain associated protein; Icap-1a [Homo sapiens] >sp O14713 O14713 INTEGRIN CYTOPLASMIC DOMAIN ASSOCIATED PROTEIN. Length = 200	gb AAB88671.1	6453	1	342	85	85	HWLWU22	pSport1
2177	HWLMC24R	(AF051100) immunoglobulin G Fd fragment [Homo sapiens] Length = 223	gb AAD15787.1	6454	82	366	77	77	HWLMC24	pSport1
2178	HWLUR40R	(AF014118) membrane-associated kinase [Homo sapiens] >sp O14731 O14731 MEMBRANE-ASSOCIATED KINASE. Length = 499	gb AAB71843.1	6455	1	324	88	90	HWLUR40	pSport1
2179	HCQCH96R			6456	94	156			HCQCH96	Lambda ZAP II
2180	HHAOD46R	(AF014955) TFAR19 [Homo sapiens] >pir G0192 G0192 TFAR19 protein - human >sp O14737 TF19 HUMAN TFAR19 PROTEIN (TF-1 CELL APOPTOSIS RELATED GENE-19 PROTEIN). Length = 125	gb AAD11579.1	6457	49	432	85	85	HHAOD46	pCMVSPORT 3.0
2181	HCYBA83R	(AF017061) vasopressin-activated calcium mobilizing putative receptor protein [Homo sapiens] Length = 781	gb AAB70253.1	6458	1	489	98	99	HCYBA83	pBluescript SK-
2182	HCROZ77R	(AF018261) EH domain binding protein Epsin [Rattus norvegicus] >sp O88339 O88339 EH DOMAIN BINDING PROTEIN EPSIN. Length = 575	gb AAC33823.1	6459	1	525	67	69	HCROZ77	pSport1
2183	HWLND06R	(AF022108) putative replication initiator origin recognition complex subunit Orc4Lp [Homo sapiens] >gb AAC80282.1  (AF047598) origin recognition complex subunit 4; Orc4p [Homo sapiens] >gb AAD22110.1  (AF132596) origin recognition complex subunit 4 [Homo sapiens]	gb AAC01957.1	6460	1	213	73	79	HWLND06	pSport1
2184	HCQCP20R	(AB038463) GC36 [Homo sapiens] Length = 664	dbj BAA92137.1	6461	2	229	98	98	HCQCP20	Lambda ZAP II

2185	HCRQF71R	(AF022799) digestive tract-specific calpain; calcium-dependent cysteine proteinase [Homo sapiens] >sp O14815 O14815 DIGESTIVE TRACT-SPECIFIC CALPAIN (EC 3.4.22.17). Length = 690	gb AAB80762.1	6462	3	383	100	100	HCRQF71	pSport1
2186	HWLNF84R	(AF025459) H14A12.3 gene product [Caenorhabditis elegans] >sp O17213 O17213 H14A12.3 PROTEIN. Length = 284	gb AAB70984.1	6463	2	457	33	52	HWLNF84	pSport1
2187	HCRMF28R	(AF026977) microsomal glutathione S-transferase 3 [Homo sapiens] >sp O14880 O14880 MICROSOMAL GLUTATHIONE S-TRANSFERASE 3. Length = 152	gb AAB82609.1	6464	8	184	74	80	HCRMF28	pSport1
2188	HCROQ32R	(AF029789) GTPase-activating protein [Homo sapiens] >sp O60484 O60484 GTPASE-ACTIVATING PROTEIN. Length = 1041	gb AAC32547.1	6465	1	297	90	90	HCROQ32	pSport1
2189	HWLOW79R	(AF030339) VESPR [Homo sapiens] >pir T09074 T09074 semaphorin receptor VESPR - human >sp O60486 O60486 VESPR. Length = 1568	gb AAC18823.1	6466	2	133	100	100	HWLOW79	pSport1
2190	HCRQL67R	(AF030430) semaphorin VIa [Mus musculus] >sp O35464 O35464 SEMAPHORIN VIA PRECURSOR. Length = 888	gb AAB86408.1	6467	21	551	68	77	HCRQL67	pSport1
2191	HCRQI10R	(AL137438) hypothetical protein [Homo sapiens] >emb CAB70736.1  (AL137438) hypothetical protein [Homo sapiens] >sp CAB70736 CAB70736 Hypothetical 69.3 kd protein (fragment). Length = 596	emb CAB70736.1	6468	3	299	99	99	HCRQI10	pSport1
2192	HWLRE34R	(AF034802) liprin-beta 1 [Homo sapiens] >sp O75336 O75336 LIPRIN-BETA1. Length = 1005	gb AAC26103.1	6469	153	242	92	100	HWLRE34	pSport1

2193	HULCD94R	(AF035178) elongation factor 1 A2 [Oryctolagus cuniculus] >emb CAA50280.1  elongation factor 1 alpha-2 [Homo sapiens] >pir S35033 EFHUA2 translation elongation factor eEF-1 alpha-2 chain - human >sp Q05639 EF12_HUMAN ELONGATION FACTOR 1-ALPHA 2 (EF-1-ALPH	gb AAC39252.1	6470	119	466	82	86	HULCD94	pSport1
2194	HHMMF84R	(AF035840) NADH:ubiquinone oxidoreductase B17 subunit [Homo sapiens] >gb AAD32451.1 AF067167_1 (AF067167) NADH-ubiquinone oxidoreductase B17 subunit homolog [Homo sapiens] >sp AAD32451 AAD32451 NADH-ubiquinone oxidoreductase B17 subunit homolog. >sp Q9513	gb AAC68838.1	6471	3	113	100	100	HHMMF84	pSport1
2195	HCRPO08R	(AF035940) similar to mago nashi [Homo sapiens] >gb AAD32457.1 AF067173_1 (AF067173) Mago homolog [Homo sapiens] >gb AAB66722.1  (AF007862) mini-Mago [Mus musculus] >gb AAC40044.1  (AF035939) similar to mago nashi [Mus musculus] >sp P50606 MGN_HUMAN MAGO NA	gb AAC39606.1	6472	1	267	94	100	HCRPO08	pSport1
2196	HCQAI71R	(AF037168) DnaJ homologue [Arabidopsis thaliana] >sp O49070 O49070 DNAJ HOMOLOGUE. Length = 284	gb AAB91418.1	6473	2	289	41	67	HCQAI71	Lambda ZAP II
2197	HCQCQ75R	polyubiquitin [Cricetus griseus] >pir S21083 S21083 polyubiquitin 5 - Chinese hamster >dbj BAA03983.1  polyubiquitin [Rattus norvegicus] {SUB 77-381} >gb AAA49129.1  ubiquitin polypeptide (heat shock related) [Gallus gallus] {SUB 225-381} Length = 381	emb CAA4294.1.1	6474	2	298	88	93	HCQCQ75	Lambda ZAP II

2198	HWLMQ74R	(AF047471) mitotic checkpoint protein kinase [Homo sapiens] >gb AAC12729.1  (AF046078) protein kinase [Homo sapiens] >gb AAD43675.1  (AF139363) BUB1 protein [Homo sapiens] >gb AB97855.2  (AF043294) putative mitotic checkpoint kinase [Homo sapiens] >sp O4	gb AAC03122.1	6475	90	281	73	76	HWLMQ74	pSport1
2199	HFVKA48R	(AF067168) NADH-ubiquinone oxidoreductase B22 subunit homolog [Homo sapiens] >sp AAD32452 AAD32452 NADH-ubiquinone oxidoreductase B22 subunit homolog. Length = 179	gb AAD32452.1 AF0671	6476	2	247	95	95	HFVKA48	pBluescript
2200	HLXNF14R	(AF047470) malate dehydrogenase precursor [Homo sapiens] >sp P40926 MDHM_HUMAN MALATE DEHYDROGENASE, MITOCHONDRIAL PRECURSOR (EC 1.1.1.37). Length = 338	gb AAC03787.1	6477	1	144	100	100	HLXNF14	pSport1
2201	H2LAB80R	(AF047711) nGAP [Homo sapiens] >sp O95174 O95174 NGAP. >emb CAB53260.1  (AL035702) dJ593C16.1 (ras GTPase activating protein) [Homo sapiens] {SUB 41-1139} Length = 1139	gb AAD04814.1	6478	3	476	89	89	H2LAB80	pBluescript SK-
2202	HOCTC23R			6479	2	208			HOCTC23	pSport1
2203	HCQDO33R	(AF052788) immunoglobulin light chain variable region [Homo sapiens] Length = 116	gb AAC36629.1	6480	3	188	83	90	HCQDO33	Lambda ZAP II
2204	HCQDD24R	(AK000460) unnamed protein product [Homo sapiens] Length = 284	dbj BAA91179.1	6481	191	376	50	53	HCQDD24	Lambda ZAP II
2205	HKAFLO6R	(AF061939) staufen protein [Homo sapiens] >sp O95793 O95793 STAUFEN PROTEIN. >gb AAD17530.1  (AF061938) staufen protein [Homo sapiens] {SUB 82-577} Length = 577	gb AAD17531.1	6482	112	465	78	83	HKAFLO6	pCMVSPORT 2.0
2206	HCRMO57R	unnamed protein product [unidentified] Length = 99	emb CAB6943.4	6483	43	330	59	63	HCRMO57	pSport1
2207	HCROO83R	(AF071172) HERC2 [Homo sapiens] >sp O95714 O95714 HERC2. Length = 4834	gb AAD08657.1	6484	2	250	97	97	HCROO83	pSport1

2208	HCRMW16R	(AB029013) KIAA 1090 protein [Homo sapiens] >sp BA.A83042 BA.A83042 KIAA1090 protein. Length = 713	dbj BA.A83042 .1	6485	3	284	60	71	HCRMW16	pSport1
2209	HWLOO35R			6486	1	108			HWLOO35	pSport1
2210	HWLV77R	(AF073298) small EDK-rich factor 2 [Homo sapiens] >gb AAC63515.1  (AF073297) small EDK-rich factor 2 [Mus musculus] >sp O75918 O75918 4F5REL. >sp O88891 O88891 4F5REL. Length = 59	gb AAC63516. 1	6487	32	238	95	95	HWLV77	pSport1
2211	HCBYBH84R	(AF080000) RSK-like protein kinase RLPK [Homo sapiens] >gb AAC31171.1  (AF074393) nuclear mitogen- and stress-activated protein kinase-1 [Homo sapiens] >pir T13149 T13149 mitogen-and stress-activated protein kinase-1, nuclear - human >sp O75582 O75582 NUC	gb AAD23915. 1	6488	52	408	93	94	HCBYBH84	pBluescript SK-
2212	HBJMG15R	(AF080683) PITSLRE protein kinase alpha SV9 isoform [Homo sapiens] >sp O95265 O95265 PITSLRE PROTEIN KINASE ALPHA SV9 ISOFORM. Length = 755	gb AAC3664. 1	6489	106	369	100	100	HBJMG15	Uni-ZAP XR
2213	H2CBH29R	(AF082556) TRF1-interacting ankyrin-related ADP-ribose polymerase [Homo sapiens] >sp O95271 O95271 TRF1-INTERACTING ANKYRIN-RELATED ADP-RIBOSE POLYMERASE. >gb AAC79842.1  (AF082557) TRF1-interacting ankyrin-related ADP-ribose polymerase [Homo sapiens] {SU	gb AAC79841. 1	6490	1	459	69	85	H2CBH29	pBluescript SK-
2214	HWLMT35R	(AJ239373) immunoglobulin heavy chain variable region [Homo sapiens] >emb CAB37166.1  (AJ239373) immunoglobulin heavy chain variable region [Homo sapiens] >pir PH1429 PH1429 Ig heavy chain V region (clone VH5-2R1) - human (fragment) {SUB 1-98} Length = 12	emb CAB3716 6.1	6491	2	388	74	88	HWLMT35	pSport1

2215	HKCSJ59R	(AF105424) brush border myosin I [Homo sapiens] >gb AAD31189.1 AF127026_1 (AF127026) brush border myosin I [Homo sapiens] >sp AAC78645 AAC78645 Brush border myosin I. >sp AAD31189 AAD31189 Brush border myosin I. >gb AAA20900.1 myosin [Homo sapiens] {SUB	gb AAC78645.1	6492	71	328	90	90	HKCSJ59	pBluescript
2216	HWMBG21R			6493	287	195			HWMBG21	pSport1
2217	H2LBB21R	(AF115402) Ets transcription factor ESE-2a [Homo sapiens] >sp AAD22960 AAD22960 Ets transcription factor ESE-2a. >gb AAD22961.1 AF115403_1 (AF115403) Ets transcription factor ESE-2b [Homo sapiens] {SUB 11-265} Length = 265	gb AAD22960.1 AF1154	6494	2	406	100	100	H2LBB21	pBluescript SK-
2218	H2LAT69R	(AB015335) HRIHFB2072 [Homo sapiens] >sp BAA88116 BAA88116 HRIHFB2072 protein (fragment). >gb AAD26690.1 AF115778_1 (AF115778) short coiled coil protein SCOCO [Mus musculus] {SUB 44-125} Length = 125	dbj BAA88116.1	6495	1	393	64	77	H2LAT69	pBluescript SK-
2219	HLWCJ40R	(AF120265) tetraspan NET-6 [Homo sapiens] >gb AAD43023.1  (AF100759) transmembrane 4 superfamily protein [Homo sapiens] >sp O95857 O95857 TETRASPAN NET-6. Length = 204	gb AAD17294.1	6496	83	214	96	100	HLWCJ40	pCMVSPORT 3.0
2220	HCQCK44R	(AF124249) SH2-containing protein Nsp1 [Homo sapiens] >sp Q9Y2X4 Q9Y2X4 SH2-CONTAINING PROTEIN NSP1. Length = 576	gb AAD28244.1 AF1242	6497	1	387	55	62	HCQCK44	Lambda ZAP II
2221	HOGDQ57R	(AF124249) SH2-containing protein Nsp1 [Homo sapiens] >sp Q9Y2X4 Q9Y2X4 SH2-CONTAINING PROTEIN NSP1. Length = 576	gb AAD28244.1 AF1242	6498	3	314	85	88	HOGDQ57	pCMVSPORT 2.0
2222	HWLQM12R	(AB011369) RBCK2 [Rattus norvegicus] >sp Q9Z334 Q9Z334 RBCK2. Length = 260	dbj BAA33957.1	6499	1	570	80	86	HWLQM12	pSport1
2223	HWLVX04R	(AF125099) HSPC038 protein [Homo sapiens] >sp Q9Y5V0 Q9Y5V0 HSPC038 PROTEIN. Length = 76	gb AAD39916.1 AF1250	6500	3	260	86	86	HWLVX04	pSport1

2224	H2CBG89R	(AF126736) ubiquitin processing protease [Homo sapiens] >sp Q9Y5T5 UBPG_HUMAN UBIQUITIN CARBOXYL-TERMINAL HYDROLASE 16 (EC 3.1.2.15) (UBIQUITIN THIOLESTERASE 16) (UBIQUITIN-SPECIFIC PROCESSING PROTEASE 16) (DEUBIQUITINATING ENZYME 16) (UBIQUITIN PROCESSIN	gb AAD20949.1	6501	9	317	38	59	H2CBG89	pBluescript SK-
2225	HWLWQ68R	(AF126743) DNAJ domain-containing protein MCJ [Homo sapiens] >sp Q9Y5T4 Q9Y5T4 DNAJ DOMAIN-CONTAINING PROTEIN MCJ. Length = 150	gb AAD38506.1 AF1267	6502	1	276	100	100	HWLWQ68	pSport1
2226	HCYBM79R	(AF127763) mitogenic oxidase [Homo sapiens] >sp Q9Y5S8 Q9Y5S8 MITOGENIC OXIDASE. Length = 564	gb AAD38133.1 AF1277	6503	52	492	100	100	HCYBM79	pBluescript SK-
2227	HMUBO53R A	(AF129075) T-COMPLEX PROTEIN 1, THETA SUBUNIT (TCP-1-THETA) [Homo sapiens] >emb CAA85520.1 Cctq [Homo sapiens] {SUB 33-65} Length = 548	gb AAD17375.1	6504	108	518	92	93	HMUBO53	pCMVSPORT 3.0
2228	HWLOT13R			6505	2	328			HWLOT13	pSport1
2229	HWLVN81R	(AF129756) G5c [Homo sapiens] >sp Q95871 Q95871 NG33. Length = 148	gb AAD18080.1 AAD180	6506	156	554	94	94	HWLVN81	pSport1
2230	HWLRV71R	(AJ132584) HIRA-interacting protein HIRIP5 [Homo sapiens] >sp CAB53015 CAB53015 HIRA-interacting protein HIRIP5. Length = 196	emb CAB53015.1	6507	3	137	95	95	HWLRV71	pSport1
2231	HCRMV30R			6508	3	218			HCRMV30	pSport1
2232	HCROK15R	(AF138302) decorin variant C [Homo sapiens] >sp Q9Y5N9 Q9Y5N9 DECORIN VARIANT C. Length = 212	gb AAD44714.1	6509	2	106	97	97	HCROK15	pSport1
2233	HTOAF87Ra	Graf protein [Homo sapiens] >sp CAA71414 CAA71414 Graf protein. Length = 759	emb CAA71414.4	6510	1	345	57	69	HTOAF87	Uni-ZAP XR
2234	HDPJM48R	(AF146793) protein B [Mus musculus] >sp Q9WUP3 Q9WUP3 PROTEIN B (FRAGMENT). Length = 193	gb AAD30564.1 AF1467	6511	81	467	56	66	HDPJM48	pCMVSPORT 3.0

2235	HWLNJ72R	(AF151820) CGI-62 protein [Homo sapiens] >sp Q9Y372 Q9Y372 CGI-62 PROTEIN. Length = 325	gb AAD34057.1 AF1518	6512	39	368	97	97	HWLNJ72	pSport1
2236	HOFME52R	(AF151852) CGI-94 protein [Homo sapiens] >sp Q9Y3A2 Q9Y3A2 CGI-94 PROTEIN. Length = 253	gb AAD34089.1 AF1518	6513	69	293	66	76	HOFME52	pCMV Sport 2.0
2237	HCQDU46R	(AF151908) CGI-150 protein [Homo sapiens] >sp Q9Y3E8 Q9Y3E8 CGI-150 PROTEIN. Length = 504	gb AAD34145.1 AF1519	6514	89	298	74	75	HCQDU46	Lambda ZAP II
2238	HCRMG55R	(AF155108) NY-REN-41 antigen [Homo sapiens] >sp Q9Y599 Q9Y599 NY-REN-41 ANTIGEN (FRAGMENT). Length = 241	gb AAD42874.1	6515	52	417	92	92	HCRMG55	pSport1
2239	HCRNZ49R			6516	3	143			HCRNZ49	pSport1
2240	HASMB62R	(AJ243883) putative transcription factor [Periplaneta americana] >sp Q9Y071 Q9Y071 PUTATIVE TRANSCRIPTION FACTOR. Length = 333	emb CAB5104.1.1	6517	264	121	84	92	HASMB62	pSport1
2241	H2LAD43R			6518	16	108			H2LAD43	pBluescript SK-
2242	H2LAY87R	IDN4-GGTR14 PROTEIN. >dbj BAA77334.1  (AB019493) IDN4-GGTR9 [Homo sapiens] {SUB 57-414} >emb CAA22908.1  (AL035303) hypothetical protein [Homo sapiens] {SUB 159-414} Length = 414	sp Q9Y6Y5 Q9Y6Y5	6519	2	121	96	96	H2LAY87	pBluescript SK-
2243	H2LAZ41R			6520	2	178			H2LAZ41	pBluescript SK-
2244	HCQCA60R			6521	2	199			HCQCA60	Lambda ZAP II
2245	HCQCB53R			6522	3	125			HCQCB53	Lambda ZAP II
2246	HCQCH45R			6523	26	229			HCQCH45	Lambda ZAP II
2247	HCQCJ70R			6524	2	109			HCQCJ70	Lambda ZAP II
2248	HCQCL32R			6525	1	99			HCQCL32	Lambda ZAP II



2249	HCQCP47R				6526	2	163				HCQCP47	Lambda ZAP II
2250	HCQDC76R				6527	2	208				HCQDC76	Lambda ZAP II
2251	HCQDH59R				6528	3	110				HCQDH59	Lambda ZAP II
2252	HCQDI82R				6529	42	245				HCQDI82	Lambda ZAP II
2253	HCQDK24R				6530	3	101				HCQDK24	Lambda ZAP II
2254	HCQDK53R				6531	3	110				HCQDK53	Lambda ZAP II
2255	HCQDL42R				6532	4	186				HCQDL42	Lambda ZAP II
2256	HCQDL82R				6533	8	154				HCQDL82	Lambda ZAP II
2257	HCQDM76R				6534	3	125				HCQDM76	Lambda ZAP II
2258	HCQDP62R				6535	3	110				HCQDP62	Lambda ZAP II
2259	HCQDR62R				6536	1	120				HCQDR62	Lambda ZAP II
2260	HCQDV85R				6537	10	195				HCQDV85	Lambda ZAP II
2261	HCQDW29R				6538	3	242				HCQDW29	Lambda ZAP II
2262	HCQDW44R	IDN4-GGTR14 PROTEIN. >dbj BAA77334.1  (AB019493) IDN4-GGTR9 [Homo sapiens] {SUB 57-414} >emb CAA22908.1  (AL035303) hypothetical protein [Homo sapiens] {SUB 159-414} Length = 414	sp Q9Y6Y5 Q9Y6Y5		6539	1	144	82	91		HCQDW44	Lambda ZAP II
2263	HCRPO09R				6540	37	357				HCRPO09	pSport1

2264	HCYBO90R	IDN4-GGTR14 PROTEIN. >dbj BAA77334.1  (AB019493) IDN4-GGTR9 [Homo sapiens] {SUB 57-414} >emb CAA22908.1  (AL035303) hypothetical protein [Homo sapiens] {SUB 159-414} Length = 414	sp Q9Y6Y5 Q9Y6Y5	6541	1	204	84	84	HCYBO90	pBluescript SK-
2265	HWLVA95R			6542	44	373			HWLVA95	pSport1
2266	HKCAA76R	(AJ010442) immunoglobulin kappa light chain [Homo sapiens] Length = 236	emb CAA0918.1.1	6543	1	498	85	87	HKCAA76	Uni-ZAP XR
2267	HWMCK11R	(AJ010442) immunoglobulin kappa light chain [Homo sapiens] Length = 236	emb CAA0918.1.1	6544	1	429	81	85	HWMCK11	pSport1
2268	HCQDA64R	(AJ223814) striatin [Homo sapiens] >sp O43815 O43815 STRIATIN. Length = 780	emb CAA1156.0.1	6545	3	473	62	65	HCQDA64	Lambda ZAP II
2269	HCRNF45R	(AJ388554) hypothetical protein [Canis familiaris] >sp Q9XSR4 Q9XSR4 HYPOTHETICAL 17.5 KD PROTEIN (FRAGMENT). Length = 174	emb CAB4685.3.1	6546	141	347	61	63	HCRNF45	pSport1
2270	HCQDC26R	(AL021683) unnamed protein product [Homo sapiens] >sp O43819 O43819 HYPOTHETICAL 29.8 KD PROTEIN ON CHROMOSOME 22. Length = 266	emb CAA1667.1.1	6547	3	269	68	81	HCQDC26	Lambda ZAP II
2271	HWLWN07R	NBK [Homo sapiens] >emb CAA18260.2  (AL022237) bK1191B2.2 (BCL2-interacting killer (apoptosis-inducing) (NBK, BP4, BIP1)) [Homo sapiens] >gb AAC50413.1  Bik [Homo sapiens] >gb AAC79124.1  apoptosis inducer Nbk [Homo sapiens] >gb AAF01156.1  (AF174424) BCL	emb CAA6201.3.1	6548	1	183	82	88	HWLWN07	pSport1
2272	HCQDU53R	ribosomal protein L3 [Homo sapiens] >emb CAA18450.1  (AL022326) dJ333H23.1 (60S Ribosomal Protein L3) [Homo sapiens] >pir S34195 S34195 ribosomal protein L3, cytosolic - human >sp P39023 RL3_HUMAN 60S RIBOSOMAL PROTEIN L3 (HIV-1 TAR RNA BINDING PROTEIN B)	emb CAA5183.9.1	6549	68	622	62	66	HCQDU53	Lambda ZAP II
2273	HCQAI55R			6550	217	333			HCQAI55	Lambda ZAP II

2274	HWLNK89R	(AL049946) hypothetical protein [Homo sapiens] >emb CAB43220.1  (AL049946) hypothetical protein [Homo sapiens] >pir T08678 T08678 hypothetical protein DKFZp564I1922.1 - human (fragment) >sp Q9Y3Y8 Q9Y3Y8 HYPOTHETICAL 63.9 KD PROTEIN (FRAGMENT). Length = 5	emb CAB4322 0.1	6551	1	99	84	84	HWLNK89	pSport1
2275	HCQCK51R	(AL050097) hypothetical protein [Homo sapiens] >emb CAB43269.1  (AL050097) hypothetical protein [Homo sapiens] >pir T08746 T08746 hypothetical protein DKFZp586B0319.1 - human (fragment) >sp Q9Y3V9 Q9Y3V9 HYPOTHETICAL 17.3 KD PROTEIN (FRAGMENT). Length = 1	emb CAB4326 9.1	6552	108	353	40	60	HCQCK51	Lambda ZAP II
2276	HAIDT47R	(AL050273) hypothetical protein [Homo sapiens] >emb CAB43374.1  (AL050273) hypothetical protein [Homo sapiens] >pir T08720 T08720 ribosomal protein L36 - human >sp Q9Y3U8 Q9Y3U8 60S RIBOSOMAL PROTEIN L36. Length = 105	emb CAB4337 4.1	6553	442	53	82	88	HAIDT47	Uni-ZAP XR
2277	HSUAK69RA			6554	18	254			HSUAK69	Uni-ZAP XR
2278	HCROB90R	(AP000001) 106aa long hypothetical protein [Pyrococcus horikoshii] >pir G71244 G71244 hypothetical protein PH0217 - Pyrococcus horikoshii >sp O57956 O57956 HYPOTHETICAL 11.5 KD PROTEIN PH0217. Length = 106	dbj BAA29286 .1	6555	335	129	50	61	HCROB90	pSport1
2279	HCRNI50R	(AL035461) dJ967N21.5 (novel MCM2/3/5 family member) [Homo sapiens] >sp CAB55276 CAB55276 DJ967N21.5 (novel MCM2/3/5 family member) (fragment). Length = 606	emb CAB5527 6.1	6556	44	577	91	94	HCRNI50	pSport1
2280	HCRPJ34R	18 kDa Alu RNA binding protein [Homo sapiens] >pir A56062 A56062 Alu RNA-binding protein - human Length = 136	gb AAA59066 1	6557	149	355	80	83	HCRPJ34	pSport1

2281	HCQBL95R				6558	124	195			HCQBL95	Lambda ZAP II
2282	HWLOR95R	3-hydroxyisobutyryl-coenzyme A hydrolase [Homo sapiens] >sp Q92931 Q92931.3-HYDROXYISOBUTYRYL-COENZYME A HYDROLASE. Length = 381	gb AAC52114.1	6559	3	536	80	81	HWLOR95	pSport1	
2283	HKCSI32R	40-kDa keratin protein [Homo sapiens] >pir A31370 KRHU9 keratin 19, type I, cytoskeletal - human Length = 400	gb AAA36044.1	6560	3	260	97	97	HKCSI32	pBluescript	
2284	HWLQK90R	40-kDa keratin protein [Homo sapiens] >pir A31370 KRHU9 keratin 19, type I, cytoskeletal - human Length = 400	gb AAA36044.1	6561	2	496	91	91	HWLQK90	pSport1	
2285	HCRNO08R	5'-AMP-activated protein kinase, gamma-1 subunit [Homo sapiens] >sp P54619 AAKG_HUMAN 5"-AMP-ACTIVATED PROTEIN KINASE, GAMMA-1 SUBUNIT (AMPK GAMMA-1 CHAIN). Length = 331	gb AAC50495.1	6562	1	540	84	86	HCRNO08	pSport1	
2286	HBGBT36R	60S ribosomal protein [Mus musculus] >sp P47963 RL13_MOUSE 60S RIBOSOMAL PROTEIN L13 (A52). {SUB 2-213} Length = 213	gb AAA69923.1	6563	1	195	84	85	HBGBT36	Uni-ZAP XR	
2287	HKLSA81R	60S RIBOSOMAL PROTEIN L7A (SURFEIT LOCUS PROTEIN 3) (FRAGMENT). Length = 132	sp Q29375 RL7A_PIG	6564	112	345	56	58	HKLSA81	pBluescript	
2288	HBCJN86R	60S ACIDIC RIBOSOMAL PROTEIN P0 (L10E) (FRAGMENT). Length = 93	sp Q29214 RLA0_PIG	6565	39	212	97	97	HBCJN86	pSport1	
2289	HCQCO29R	(AF014364) beta actin [Cricetinae gen. sp.] >sp O35248 O35248 BETA ACTIN. Length = 295	gb AAB66488.1	6566	2	313	93	95	HCQCO29	Lambda ZAP II	
2290	HWLMZ47R			6567	82	282			HWLMZ47	pSport1	
2291	HCRNZ75R	alpha-1 chain precursor (AA -27 to 917) (2953 is 2nd base in codon) [Homo sapiens] Length = 944	emb CAA29075.1	6568	2	334	96	96	HCRNZ75	pSport1	
2292	HCRPD88R	alpha-1 type III collagen [Homo sapiens] Length = 345	gb AAA52002.1	6569	2	271	98	98	HCRPD88	pSport1	

2293	HCRPK90R	alpha-L fucosidase [Homo sapiens] Length = 353	gb AAA52482.1	6570	2	235	73	73	HCRPK90	pSport1
2294	HCQDC47R	alpha-N-acetylglucosaminidase [Homo sapiens] >gb AAA51677.1  alpha-N-acetylglucosaminidase [Homo sapiens] >gb AAB06718.1  alpha-N-acetylglucosaminidase [Homo sapiens] >emb CAB41237.1  bK250D10.5 (alpha-N-acetylglucosaminidase) [Homo sapiens] >pir	gb AAA36351.1	6571	1	459	100	100	HCQDC47	Lambda ZAP II
2295	HCQDT07R	(AK000113) unnamed protein product [Homo sapiens] Length = 273	dbj BAA90953.1	6572	55	312	84	88	HCQDT07	Lambda ZAP II
2296	H2CBR33R	alternatively spliced form [Homo sapiens] >sp O75666 O75666 CXORF5 (71-7A) PROTEIN (71-7A). Length = 367	emb CAA76185.1	6573	3	242	100	100	H2CBR33	pBluescript SK-
2297	HWLXV36R	dI408N23.5 (novel protein similar to aminopeptidase P) [Homo sapiens] >sp CAB63053 CAB63053 D1408N23.5 (novel protein similar to aminopeptidase P) (fragment). Length = 135	emb CAB63053.1	6574	3	380	95	96	HWLXV36	pSport1
2298	HWLRE24R	amplaxin [Homo sapiens] >pir A48063 A48063 mammary tumor/squamous cell carcinoma-associated protein EMS1 - human >sp Q14247 SRC8_HUMAN SRC SUBSTRATE CORTACTIN (AMPLAXIN) (EMS1 ONCOGENE). Length = 550	gb AAA58455.1	6575	2	436	98	98	HWLRE24	pSport1
2299	HWMB27R	apomucin [Homo sapiens] >pir A57534 A57534 mucin (clone L31) - human (fragment) >sp Q13792 Q13792 APOMUCIN (FRAGMENT). Length = 1042	emb CAA88307.1	6576	1	228	79	79	HWMB27	pSport1
2300	HWMBK08R	arginine-rich protein [Homo sapiens] >pir S27956 S27956 arginine-rich protein - human >sp P55145 ARGR_HUMAN ARGININE-RICH PROTEIN. Length = 234	gb AAB08753.1	6577	2	118	97	97	HWMBK08	pSport1

2301	HKCSA84R	ARSE [Homo sapiens] >pir 37187 37187 arylsulfatase E (EC 3.1.6.-) - human >sp P51690 ARSE_HUMAN ARYLSULFATASE E PRECURSOR (EC 3.1.6.-) (ASE). Length = 589	emb CAA5855 6.1	6578	1	231	73	73	HKCSA84	pBluescript
2302	HKCTB10R	aspartokinase II-homoserine dehydrogenase II [Escherichia coli] Length = 810	gb AA24165. 1	6579	434	102	70	75	HKCTB10	pBluescript
2303	HCRPX81R	ataxia-telangiectasia group D-associated protein [Homo sapiens] >pir A49618 A49618 probable ataxia-telangiectasia group D protein - human >sp Q14134 Q14134 ATAXIA-TELANGIECTASIA GROUP D-ASSOCIATED PROTEIN. Length = 588	gb AAA35762. 1	6580	50	442	84	84	HCRPX81	pSport1
2304	HWLRP68R	ATP synthase subunit e [Homo sapiens] >sp P56385 ATP_HUMAN ATP SYNTHASE E CHAIN, MITOCHONDRIAL (EC 3.6.1.34). {SUB 2-69} Length = 69	dbj BAA23322 1	6581	1	231	69	69	HWLRP68	pSport1
2305	HCQCT96R	ATPase 6 [Homo sapiens] >gb AAB58948.1  ATPase 6 [Homo sapiens] >pir A01049 PWHU6 H+- transporting ATP synthase (EC 3.6.1.34) protein 6 - human mitochondrion >sp P00846 ATP6_HUMAN ATP SYNTHASE A CHAIN (EC 3.6.1.34) (PROTEIN 6). Length = 226	emb CAA2403 1.1	6582	3	176	73	77	HCQCT96	Lambda ZAP II
2306	HCQCV26R	ATPase 6 [Homo sapiens] >gb AAB58948.1  ATPase 6 [Homo sapiens] >pir A01049 PWHU6 H+- transporting ATP synthase (EC 3.6.1.34) protein 6 - human mitochondrion >sp P00846 ATP6_HUMAN ATP SYNTHASE A CHAIN (EC 3.6.1.34) (PROTEIN 6). Length = 226	emb CAA2403 1.1	6583	363	716	66	69	HCQCV26	Lambda ZAP II

2307	HWLXR95R	ATPase coupling factor 6 subunit [Homo sapiens] >emb CAB53667.1 (AL110183) hypothetical protein [Homo sapiens] >emb CAB53667.1  (AL110183) hypothetical protein [Homo sapiens] >pir JT0563 JT0563 coupling factor 6 precursor, mitochondrial - human >sp P1885	gb AAA51807.1	6584	2	253	100	100	HWLXR95	pSport1
2308	HCQCV96R	ATPase subunit 6 [Homo sapiens] >dbj BAA07295.1  ATPase subunit 6 [Homo sapiens] Length = 226	dbj BAA07295.1	6585	147	368	58	61	HCQCV96	Lambda ZAP II
2309	HEPAD45R	autoantigen [Homo sapiens] >sp Q13025 Q13025 AUTOANTIGEN. Length = 968	gb AAB51444.1	6586	2	277	100	100	HEPAD45	Uni-ZAP XR
2310	HCRNP41R	(A13021288) beta 2-microglobulin [Homo sapiens] >gb AAA87972.1  beta-2-microglobulin [Pan troglodytes] >gb AAA88008.1  beta-2-microglobulin [Gorilla gorilla] >gb AAD48083.1  (AF072097) beta-2 microglobulin [Homo sapiens] >pir A90976 MGHUB2 beta-2-microglob	dbj BAA35182.1	6587	39	281	60	63	HCRNP41	pSport1
2311	HCYBK83R			6588	471	10			HCYBK83	pBluescript SK-
2312	HCRND59R	beta-adrenergic receptor kinase [Bos taurus] >pir A40088 A40088 beta-adrenergic-receptor kinase (EC 2.7.1.126) 1 - bovine >sp P21146 ARK1_BOVIN BETA-ADRENERGIC RECEPTOR KINASE 1 (EC 2.7.1.126) (BETA-ARK-1) (G- PROTEIN COUPLED RECEPTOR KINASE 2). Length =	gb AAA30384.1	6589	2	385	96	98	HCRND59	pSport1
2313	HCRNE86R			6590	1	117			HCRNE86	pSport1
2314	HWLQZ23R			6591	1	231			HWLQZ23	pSport1
2315	HCRMA15R			6592	6	152			HCRMA15	pSport1
2316	HCRMJ42R			6593	14	244			HCRMJ42	pSport1
2317	HCRMK50R	unnamed protein product [unidentified] Length = 180 emb CAB6919.5.1	emb CAB6919.5.1	6594	24	113	100	100	HCRMK50	pSport1

2318	HCRMO88R				6595	92	352			HCRMO88	pSportI
2319	HCRNB87R				6596	354	566			HCRNB87	pSportI
2320	HCRNI95R				6597	2	97			HCRNI95	pSportI
2321	HCRNL44R				6598	1	195			HCRNL44	pSportI
2322	HCROD06R				6599	137	454			HCROD06	pSportI
2323	HCROT10R				6600	2	211			HCROT10	pSportI
2324	HCRPF12R				6601	25	231			HCRPF12	pSportI
2325	HCRPK22R				6602	1	96			HCRPK22	pSportI
2326	HCRPK46R				6603	29	142			HCRPK46	pSportI
2327	HCRPK48R				6604	22	153			HCRPK48	pSportI
2328	HCRQF74R	unnamed protein product [unidentified] Length = 180	emb CAB6919	5.1	6605	1	129	100	100	HCRQF74	pSportI
2329	HCRQG02R	unnamed protein product [unidentified] Length = 180	emb CAB6919	5.1	6606	1	171	95	100	HCRQG02	pSportI
2330	HCRQM26R				6607	23	175			HCRQM26	pSportI
2331	HCRQM90R	unnamed protein product [unidentified] Length = 180	emb CAB6919	5.1	6608	3	104	100	100	HCRQM90	pSportI
2332	HHMMA34R				6609	14	157			HHMMA34	pSportI
2333	HHMMA44R				6610	97	219			HHMMA44	pSportI
2334	HHMMC42R				6611	26	160			HHMMC42	pSportI
2335	HHMMC86R				6612	14	154			HHMMC86	pSportI
2336	HHMMD59R				6613	6	143			HHMMD59	pSportI
2337	HHMME38R				6614	111	245			HHMME38	pSportI
2338	HHMME40R				6615	3	95			HHMME40	pSportI
2339	HHMME50R	unnamed protein product [unidentified] Length = 180	emb CAB6919	5.1	6616	3	110	100	100	HHMME50	pSportI
2340	HHMME58R				6617	5	142			HHMME58	pSportI
2341	HHMME80R				6618	25	159			HHMME80	pSportI
2342	HHMMF60R				6619	2	136			HHMMF60	pSportI
2343	HHMMF79R				6620	3	173			HHMMF79	pSportI
2344	HOCTA39R				6621	457	582			HOCTA39	pSportI
2345	HS2AN66R				6622	161	391			HS2AN66	pSportI
2346	HULCG37R				6623	44	166			HULCG37	pSportI



2347	HWLMO16R				6624	42	146				HWLMO16	pSportI
2348	HWLMO29R				6625	24	143				HWLMO29	pSportI
2349	HWLMO44R				6626	35	142				HWLMO44	pSportI
2350	HWLMO47R				6627	31	129				HWLMO47	pSportI
2351	HWLMO84R				6628	1	177				HWLMO84	pSportI
2352	HWLMO27R				6629	2	184				HWLMO27	pSportI
2353	HWLMO28R				6630	19	246				HWLMO28	pSportI
2354	HWLMO64R				6631	1	168				HWLMO64	pSportI
2355	HWLMO65R				6632	66	197				HWLMO65	pSportI
2356	HWLNZ01R				6633	3	101				HWLNZ01	pSportI
2357	HWLNZ20R				6634	2	121				HWLNZ20	pSportI
2358	HWLNZ35R				6635	3	158				HWLNZ35	pSportI
2359	HWLNZ44R				6636	2	181				HWLNZ44	pSportI
2360	HWLNZ59R				6637	2	184				HWLNZ59	pSportI
2361	HWLOV04R	unnamed protein product [unidentified] Length = 180 emb CAB6919 5.1			6638	3	134	62	70		HWLOV04	pSportI
2362	HWLOW58R				6639	264	494				HWLOW58	pSportI
2363	HWLOZ37R				6640	322	513				HWLOZ37	pSportI
2364	HWLQF96R				6641	249	464				HWLQF96	pSportI
2365	HWLRV12R				6642	7	120				HWLRV12	pSportI
2366	HWLWE68R				6643	2	241				HWLWE68	pSportI
2367	HWLXA42R	unnamed protein product [unidentified] Length = 180 emb CAB6919 5.1			6644	3	176	100	100		HWLXA42	pSportI
2368	HWLXA48R				6645	1	132				HWLXA48	pSportI
2369	HWLXA94R				6646	10	186				HWLXA94	pSportI
2370	HWLXI52R				6647	1	114				HWLXI52	pSportI
2371	HWMBR11R				6648	2	136				HWMBR11	pSportI
2372	HWMBR26R				6649	3	278				HWMBR26	pSportI
2373	HWMBR49R	unnamed protein product [unidentified] Length = 180 emb CAB6919 5.1			6650	48	260	100	100		HWMBR49	pSportI
2374	HWMBR53R				6651	3	194				HWMBR53	pSportI
2375	HWMBR56R				6652	1	156				HWMBR56	pSportI
2376	HWMBR18R				6653	1	117				HWMBR18	pSportI

2377	HWMB36R				6654	2	187				HWMB36	pSportl
2378	HWMB81R				6655	5	223				HWMB81	pSportl
2379	HWMBW16R				6656	86	394				HWMBW16	pSportl
2380	HCRMH48R				6657	95	421				HCRMH48	pSportl
2381	HCRMY75R				6658	3	254				HCRMY75	pSportl
2382	HCRNZ66R				6659	3	305				HCRNZ66	pSportl
2383	HCROJ91R				6660	8	283				HCROJ91	pSportl
2384	HCRPR59R				6661	26	202				HCRPR59	pSportl
2385	HCRPY45R				6662	218	430				HCRPY45	pSportl
2386	HCRQG95R	unnamed protein product [unidentified] Length = 180	emb CAB6919	5.1	6663	3	185	82	86		HCRQG95	pSportl
2387	HHMMC37R				6664	13	144				HHMMC37	pSportl
2388	HHMMC68R				6665	3	137				HHMMC68	pSportl
2389	HHMMD73R				6666	2	160				HHMMD73	pSportl
2390	HHMMF44R				6667	2	154				HHMMF44	pSportl
2391	HTWEL13RA				6668	2	157				HTWEL13	pSportl
2392	HWLMT48R				6669	343	480				HWLMT48	pSportl
2393	HWLQK72R				6670	17	103				HWLQK72	pSportl
2394	HWLUI68R				6671	3	476				HWLUI68	pSportl
2395	HWLVY86R				6672	234	464				HWLVY86	pSportl
2396	HE2JQ95R				6673	2	232				HE2JQ95	Uni-ZAP XR
2397	HCRMH46R				6674	65	334				HCRMH46	pSportl
2398	HWLMW81R				6675	3	191				HWLMW81	pSportl
2399	HWLND45R				6676	91	501				HWLND45	pSportl
2400	HWLWG95R				6677	23	298				HWLWG95	pSportl
2401	HCQCX19R	beta-hexosaminidase beta-subunit [Homo sapiens] >pir A31250 A31250 beta-N-acetylhexosaminidase (EC 3.2.1.52) beta chain precursor - human >sp P07686 HEXB_HUMAN BETA- HEXOSAMINIDASE BETA CHAIN PRECURSOR (EC 3.2.1.52) (N-ACETYL-BETA- GLUCOSAMINIDASE) (BETA-N	gb AAA52645.1		6678	3	143	65	73		HCQCX19	Lambda ZAP II

2402	HCRQO33R	bHLH protein MesP2 [Mus musculus] >sp O08574 O08574 MESODERM POSTERIOR 2 (BHLH PROTEIN MESP2). Length = 370	gb AAB51199. 	6679	2	442	59	63	HCRQO33	pSportI
2403	HCRNT56R	BN51 protein [Homo sapiens] >pir A43700 A43700 BN51 protein - human >sp P05423 BN51_HUMAN BN51 PROTEIN. Length = 395	gb AAA51838. 	6680	1	516	78	79	HCRNT56	pSportI
2404	HCRPR45R	branched-chain alpha-keto acid dehydrogenase E1 alpha subunit [human, Peptide, 443 aa] [Homo sapiens] Length = 443	gb AAB20222. 	6681	3	167	100	100	HCRPR45	pSportI
2405	HCRMJ70R	C protein (AA 1-159) [Homo sapiens] >pir S01387 S01387 U1 snRNP protein C - human >sp P09234 RUIC_HUMAN U1 SMALL NUCLEAR RIBONUCLEOPROTEIN C (U1-C). Length = 159	emb CAA3103 7.1	6682	2	169	100	100	HCRMJ70	pSportI
2406	HWLMM72R	C10 [Homo sapiens] >sp Q99622 Q99622 CHROMOSOME 12P13 SEQUENCE; HTGS PHASE 3, COMPLETE SEQUENCE. Length = 126	gb AAB51329. 	6683	80	385	81	87	HWLMM72	pSportI
2407	HCRMD32R	CAG-isl 7 [Homo sapiens] >sp P50914 RL14_HUMAN 60S RIBOSOMAL PROTEIN L14 (CAG-ISL 7). {SUB 2-213} Length = 213	gb AACI6021. 	6684	2	292	73	75	HCRMD32	pSportI
2408	HCRQC71R	calpactin I light chain [Bos taurus] >gb AAA58404.1  calpactin I light chain [Homo sapiens] >gb AA58426.1  cellular ligand of annexin II [Homo sapiens] >pir JC1139 JC1139 calpactin I light chain - human >pir B28489 B28489 calpactin I light chain - bovine	gb AAA30423. 	6685	1	261	98	98	HCRQC71	pSportI
2409	HWMCH04R	carbonic anhydrase II [Homo sapiens] >gb AAA51909.1  carbonic anhydrase II [Homo sapiens] >gb AAA51911.1  carbonic anhydrase II [Homo sapiens] >emb CAA68426.1  carbonic anhydrase II (AA 1-260) [Homo sapiens] >pir A27175 CRHU2 carbonate dehydratase (EC 4.2	gb AAA51908. 	6686	3	320	81	84	HWMCH04	pSportI

2410	HCQDH40R				6687	2	331			HCQDH40	Lambda ZAP II
2411	HKAHM80R	CDC37 homolog [Homo sapiens] >gb AAB63979.1  CDC37 homolog [Homo sapiens] >pir G02313 G02313 CDC37 homolog - human >sp Q16543 Q16543 CDC37 HOMOLOG. Length = 378	gb AAB04798.1	6688	2	388	85	85		HKAHM80	pCMV Sport 2.0
2412	H2CBM60R	CDP-DIACYLGLYCEROL--SERINE O- PHOSPHATIDYLTRANSFERASE (EC 2.7.8.8) (PHOSPHATIDYLSERINE SYNTHASE). [Escherichia coli] >dbj BAA16473.1  CDP- DIACYLGLYCEROL--SERINE O- PHOSPHATIDYLTRANSFERASE (EC 2.7.8.8) (PHOSPHATIDYLSERINE SYNTHASE). [Escherichia coli] >sp P7	dbj BAA16470.1	6689	2	532	99	99		H2CBM60	pBluescript SK-
2413	HCQAN45R	chaperonin (HSP60) [Homo sapiens] >sp G242370 G242370 P60, 60-KDA HEAT SHOCK PROTEIN, HSP60. {SUB 27-55} >pir A56868 A56868 heat shock protein 60 - bovine (fragment) {SUB 27-48} Length = 573	gb AAA36022.1	6690	3	281	66	69		HCQAN45	Lambda ZAP II
2414	HWMCI76R			6691	3	317				HWMCI76	pSport1
2415	HWLXR73R			6692	3	341				HWLXR73	pSport1
2416	HWLOI59R	tat interactive protein [Homo sapiens] Length = 482	gb AAB02683.1	6693	2	646	80	82		HWLOI59	pSport1
2417	HWLUX53R	cpn10 protein [Bos taurus] >gb AAA50953.1  chaperonin 10 [Homo sapiens] >emb CAA53455.1  heat shock protein 10 [Homo sapiens] >emb CAB75425.1  (AJ250915) chaperonin 10, Hsp10 protein [Homo sapiens] >pir S47532 S47532 chaperonin groES - human >pir A56682 A	emb CAA4928.8.1	6694	1	282	87	87		HWLUX53	pSport1

2418	HCRNB29R	cyclophilin C, Cyp-C [human, kidney, Peptide, 212 aa] [Homo sapiens] >pir A54204 A54204 peptidylprolyl isomerase (EC 5.2.1.8) C precursor - human >sp P45877 CYPC_HUMAN PEPTIDYL-PROLYL CIS-TRANS ISOMERASE C (EC 5.2.1.8) (PPIASE) (ROTAMASE) (CYCLOPHILIN C).	gb AAB31350.1	6695	1	336	100	100	HCRNB29	pSport1
2419	HARMO20R	cytochrome oxidase III [Homo sapiens] >pir A00482 OTHU3 cytochrome-c oxidase (EC 1.9.3.1) chain III - human mitochondrion >gb AAB63452.1 (AF004341) cytochrome c oxidase subunit III [Homo sapiens] {SUB 167-261} Length = 261	emb CAA2403.2.1	6696	153	275	60	64	HARMO20	pCMVSPORT 3.0
2420	HCQCQ58R	cytochrome c oxidase subunit 3 [Homo sapiens] >dbj BAA77671.1  cytochrome c oxidase subunit 3 [Homo sapiens] >sp P00414 COX3_HUMAN CYTOCHROME C OXIDASE POLYPEPTIDE III (EC 1.9.3.1). >sp BAA77671 BAA77671 Cytochrome c oxidase subunit 3 (fragment). >gb AAB5	dbj BAA77671.1	6697	158	280	64	65	HCQCQ58	Lambda ZAP II
2421	HCQDQ11R	cytochrome c oxidase subunit 3 [Homo sapiens] >dbj BAA77671.1  cytochrome c oxidase subunit 3 [Homo sapiens] >sp P00414 COX3_HUMAN CYTOCHROME C OXIDASE POLYPEPTIDE III (EC 1.9.3.1). >sp BAA77671 BAA77671 Cytochrome c oxidase subunit 3 (fragment). >gb AAB5	dbj BAA77671.1	6698	272	550	72	75	HCQDQ11	Lambda ZAP II
2422	HCQDM81R	cytochrome oxidase III [Homo sapiens] >pir A00482 OTHU3 cytochrome-c oxidase (EC 1.9.3.1) chain III - human mitochondrion >gb AAB63452.1 (AF004341) cytochrome c oxidase subunit III [Homo sapiens] {SUB 167-261} Length = 261	emb CAA2403.2.1	6699	129	251	71	72	HCQDM81	Lambda ZAP II

2423	HCQCU09R	cytochrome oxidase subunit I [Hyllobates lar] >dbj BAA07496.1  Cytochrome C oxidase subunit I (COXI) [Hyllobates syndactylus] >dbj BAA07496.1  Cytochrome C oxidase subunit I (COXI) [Hyllobates syndactylus] >pir 37049 37049 cytochrome-c oxidase (EC 1.9.3.1)	emb CAA6763 0.1	6700	70	186	83	89	HCQCU09	Lambda ZAP II
2424	HHSGT23R	cytochrome oxidase subunit II [Homo sapiens] >gb AAA20844.1  cytochrome oxidase subunit II [Homo sapiens] >gb AAA20845.1  cytochrome oxidase subunit II [Homo sapiens] >gb AAA20847.1  cytochrome oxidase subunit II [Homo sapiens] >gb AAA31850.1  cytochrome	gb AAA20843. 1	6701	165	284	51	55	HHSGT23	Uni-ZAP XR
2425	HCQDA11R	cytochrome oxidase subunit II [Homo sapiens] >gb AAA20844.1  cytochrome oxidase subunit II [Homo sapiens] >gb AAA20845.1  cytochrome oxidase subunit II [Homo sapiens] >gb AAA20847.1  cytochrome oxidase subunit II [Homo sapiens] >gb AAA31850.1  cytochrome	gb AAA20843. 1	6702	165	284	59	62	HCQDA11	Lambda ZAP II
2426	HFIJB15R	cytochrome oxidase subunit II [Homo sapiens] >gb AAA20844.1  cytochrome oxidase subunit II [Homo sapiens] >gb AAA20845.1  cytochrome oxidase subunit II [Homo sapiens] >gb AAA20847.1  cytochrome oxidase subunit II [Homo sapiens] >gb AAA31850.1  cytochrome	gb AAA20843. 1	6703	326	517	84	87	HFIJB15	pSport1
2427	HACCH14R	cytochrome oxidase subunit II [Homo sapiens] >gb AAA20844.1  cytochrome oxidase subunit II [Homo sapiens] >gb AAA20845.1  cytochrome oxidase subunit II [Homo sapiens] >gb AAA20847.1  cytochrome oxidase subunit II [Homo sapiens] >gb AAA31850.1  cytochrome	gb AAA20843. 1	6704	100	267	63	67	HACCH14	Uni-ZAP XR

2428	HWLNH49R	cytochrome P450 PCN3 [Homo sapiens] >pir A34101 A34101 cytochrome P450 3A5 - human >sp P20815 CP35_HUMAN CYTOCHROME P450 3A5 (EC 1.14.14.1) (CYP11A5) (P450-PCN3). >gb AB00083.1  cytochrome P450 [Homo sapiens] {SUB 1-24} Length = 502	gb AAA02993.1	6705	267	401	68	74	HWLNH49	pSport1
2429	HWLRO11R	cytochrome P450 reductase [EC 1.6.2.4] [human, placenta, Peptide Partial, 676 aa] [Homo sapiens] Length = 676	gb AB21814.1	6706	2	190	98	98	HWLRO11	pSport1
2430	HCRMP82R	cytochrome P450-IIB [Homo sapiens] >gb AAF32444.1 AC023172_1 (AC023172) CYP2B6 [Homo sapiens] >pir A32969 A32969 cytochrome P450 2B6 - human >sp P20813 CPB6_HUMAN CYTOCHROME P450 2B6 (EC 1.14.14.1) (CYP11B6) (P450 IIB1). >gb AAD25924.1 AF081569_1 (AF08156	gb AAA52144.1	6707	2	475	90	90	HCRMP82	pSport1
2431	HCRPV08R	KERATIN TYPE II CYTOSKELETAL 8 (FRAGMENT). Length = 116	sp Q29386 Q29386	6708	3	269	55	57	HCRPV08	pSport1
2432	HWMBB77R	macrophage inflammatory protein-2beta precursor [Homo sapiens] >pir JH0282 JH0282 GRO-gamma precursor - human >sp P19876 MI2B_HUMAN MACROPHAGE INFLAMMATORY PROTEIN-2- BETA PRECURSOR (MIP2-BETA) (GROWTH REGULATED PROTEIN GAMMA) (GRO- GAMMA). >gb AAA03454.1	emb CAA3780.9.1	6709	2	415	76	76	HWMBB77	pSport1
2433	HHEPL48R	cytotoxic ligand TRAIL receptor [Homo sapiens] >sp O00220 O00220 CYTOTOXIC LIGAND TRAIL RECEPTOR. Length = 468	gb AAC51226.1	6710	2	229	70	70	HHEPL48	pCMV Sport 3.0
2434	HCRPT53R	DAP-3 [Homo sapiens] >sp P51398 DAP3_HUMAN DEATH-ASSOCIATED PROTEIN 3 (DAP-3). Length = 398	emb CAA5853.5.1	6711	3	179	100	100	HCRPT53	pSport1
2435	HA5BV11R	death associated protein 5 [Homo sapiens] Length = 907	emb CAA6185.7.1	6712	3	314	58	60	HA5BV11	pSport1

2436	HCQCD92R	decay-accelerating factor precursor [Homo sapiens] Length = 376	gb AAA52167. 	6713	2	130	57	67	HCQCD92	Lambda ZAP II
2437	HTXJU67R	(AF064768) diacylglycerol kinase alpha [Homo sapiens] Length = 210	gb AAC34803. 	6714	23	124	90	90	HTXJU67	Uni-ZAP XR
2438	HWMCL33R	diacylglycerol kinase [Homo sapiens] >sp P52824 KDG_HUMAN DIACYLGLYCEROL KINASE, DELTA (EC 2.7.1.107) (DIGLYCERIDE KINASE) (DGK- DELTA) (DAG KINASE DELTA) (80 KD DIACYLGLYCEROL KINASE). Length = 942	gb AAA98749. 	6715	2	367	88	89	HWMCL33	pSportI
2439	HCRMM56R			6716	2	250			HCRMM56	pSportI
2440	HCQCO67R	dj142L7.3 (Connective tissue growth factor (NOV, GIG) LIKE protein) [Homo sapiens] >gb AAD31517.1 AF143679_1 (AF143679) lost in inflammatory breast cancer tumor suppressor protein [Homo sapiens] >sp O95958 O95958 DJ142L7.3 (CONNECTIVE TISSUE GROWTH FACTOR	emb CABI655 6.1	6717	3	209	73	79	HCQCO67	Lambda ZAP II
2441	HCRPQ41R	DOCK180 protein [Homo sapiens] >sp Q14185 Q14185 DOCK180 PROTEIN. Length = 1865	dbj BAA09454 	6718	3	320	45	65	HCRPQ41	pSportI
2442	HWLVI33R	dodecenoyl-CoA delta-isomerase [Homo sapiens] >pir A55723 A55723 dodecenoyl-CoA Delta-isomerase (EC 5.3.3.8) precursor, mitochondrial - human >sp P42126 D3D2_HUMAN 3,2-TRANS-ENOYL-COA ISOMERASE, MITOCHONDRIAL PRECURSOR (EC 5.3.3.8) (DODECENOYL-COA DELTA-1	emb CAA8106 6.1	6719	2	298	65	70	HWLVI33	pSportI
2443	HWMBA55R	dynamitin [Homo sapiens] >sp Q13561 DYNC_HUMAN DYNAMITIN, 50 KD ISOFORM (50 KD DYNEIN-ASSOCIATED POLYPEPTIDE) (DYNAMITIN). Length = 406	gb AAC50423. 	6720	3	404	53	54	HWMBA55	pSportI
2444	HCYBK79R			6721	11	217			HCYBK79	pBluescript SK-



2445	HCRPS75R	elongation factor 2 [Homo sapiens] >emb CAA77750.1  human elongation factor 2 [Homo sapiens] >pir S18294 EFHU2 translation elongation factor eEF-2 - human >sp P13639 EF2_HUMAN ELONGATION FACTOR 2 (EF-2). >gb AAA50388.1  elongation factor 2 [Homo sapiens]	emb CAA3582 9.1	6722	2	328	85	88	HCRPS75	pSport1
2446	HCRMJ60R	endoglin [Homo sapiens] Length = 625	emb CAA5089 1.1	6723	81	230	77	78	HCRMJ60	pSport1
2447	HCRPV09R	endozepine precursor [Homo sapiens] >pir B26448 NZHU endozepline - human >sp P07108 ACBP_HUMAN ACYL-COA- BINDING PROTEIN (ACBP) (DIAZEPAM BINDING INHIBITOR) (DBI) (ENDOZEPINE) (EP). {SUB 2-87} Length = 87	gb AAA35788. 1	6724	1	318	100	100	HCRPV09	pSport1
2448	HCRON89R	enhancer protein [Homo sapiens] >pir S4533 S4533 enhancer protein - human Length = 199	gb AAA50464. 1	6725	2	361	80	80	HCRON89	pSport1
2449	HAAAT79R	epithelial glycoprotein (EGP) precursor [Homo sapiens] Length = 314	gb AAA35723. 1	6726	1	579	99	99	HAAAT79	pSport1
2450	HLDDP53R	ERD-2-like protein, ELP-1 - human >emb CAA45277.1  KDEL receptor [Homo sapiens] {SUB 3-214} Length = 214	pir A42286 A4 2286	6727	28	486	98	98	HLDDP53	pCMVSPORT 3.0
2451	HWLME23R	FAST kinase [Homo sapiens] >pir J37386 J37386 FAST kinase - human >sp Q14296 Q14296 FAST KINASE. Length = 549	emb CAA6044 8.1	6728	3	407	53	53	HWLME23	pSport1
2452	HWLVP88R	fau [Homo sapiens] >emb CAA46714.1  fau 1 [Homo sapiens] >pir JC1278 JC1278 ubiquitin-like protein / ribosomal protein S30, cytosolic - human >sp P35544 UBIM_HUMAN UBIQUITIN-LIKE PROTEIN FUBI. {SUB 1-74} Length = 133	emb CAA4671 6.1	6729	3	473	77	79	HWLVP88	pSport1

2453	HCROF57R	fibroblast activation protein [Homo sapiens] >sp Q12884 Q12884 FIBROBLAST ACTIVATION PROTEIN. >gb AAF21600.1  (AF007822) cytoplasmic Seprase truncated isoform [Homo sapiens] {SUB 522-760} Length = 760	gb AAB49652. 1	6730	2	493	96	96	HCROF57	pSport1
2454	HMWAM77R	FOLYLPOLYGLUTAMATE SYNTHASE, MITOCHONDRIAL PRECURSOR (EC 6.3.2.17) (FOLYLPOLY-GAMMA-GLUTAMATE SYNTHETASE) (FPGS). >gb AAA35852.1  folypolylglutamate synthetase [Homo sapiens] {SUB 43-587} >gb AA87568.1  folypolylglutamate synthetase [Homo sapiens] {SUB 1	sp Q05932 FO LC_HUMAN	6731	1	78	57	60	HMWAM77	Uni-ZAP XR
2455	HCQCO75R	git protein - phage lambda >sp P03762 SIEB_LAMBD SUPERINFECTION EXCLUSION PROTEIN B. >emb CAA23982.1  reading frame GIT [bacteriophage lambda] {SUB 5- 183} >emb CAA41524.1  git [bacteriophage lambda] {SUB 6-67} Length = 183	pir J43010 QQ BPGI	6732	264	82	46	52	HCQCO75	Lambda ZAP II
2456	HCQCR94R	glutathione peroxidase-GI [Homo sapiens] Length = 190	emb CAA4839 4.1	6733	1	114	95	95	HCQCR94	Lambda ZAP II
2457	HNBGTG35R	(AF134895) glyoxylate reductase [Homo sapiens] >gb AAD45886.1 AF146018_1 (AF146018) hydroxypyruvate reductase [Homo sapiens] >gb AAD46517.1 AF146689_1 (AF146689) hydroxypyruvate reductase [Homo sapiens] >sp AAD45886 AAD45886 Hydroxypyruvate reductase. >sp	gb AAF00111. 1 AF1348	6734	1	285	91	92	HNBGTG35	pSport1
2458	HCROE12R			6735	10	105			HCROE12	pSport1

2459	HCQAB69R	gro protein [Homo sapiens] >emb CAA31027.1  MGSA preprotein (AA -34 to 73) [Homo sapiens] >emb CAA38361.1  melanoma growth stimulatory activity preprotein [Homo sapiens] >pir S13669 A28414 melanoma growth-stimulatory activity precursor - human >sp P09341	gb AAA35933.1	6736	118	408	84	86	HCQAB69	Lambda ZAP II
2460	HCQAR52R	gro protein [Homo sapiens] >emb CAA31027.1  MGSA preprotein (AA -34 to 73) [Homo sapiens] >emb CAA38361.1  melanoma growth stimulatory activity preprotein [Homo sapiens] >pir S13669 A28414 melanoma growth-stimulatory activity precursor - human >sp P09341	gb AAA35933.1	6737	2	103	82	82	HCQAR52	Lambda ZAP II
2461	HCQAM84R	growth-regulating protein [Homo sapiens] >pir A56008 A56008 growth-regulating protein BB1 - human >sp P50290 BB1_HUMAN GROWTH- REGULATING PROTEIN BB1. Length = 57	gb AAA18898.1	6738	184	131	63	70	HCQAM84	Lambda ZAP II
2462	HWLMG29R	GTP binding protein [Mus musculus] >pir A39611 A39611 probable GTP-binding protein - mouse >sp P23249 MV10_MOUSE PROTEIN MOV-10. >emb CAA53453.1  gb 110/Mov 10 locus [Mus musculus] {SUB 1-45} Length = 1004	emb CAA36803.1	6739	7	204	98	100	HWLMG29	pSport1
2463	HCQCF55R	alpha subunit (aa 1-394) [Bos taurus] >sp P04896 GBAS_BOVIN GUANINE NUCLEOTIDE-BINDING PROTEIN G(S), ALPHA SUBUNIT (ADENYLATE CYCLASE- STIMULATING G ALPHA PROTEIN). Length = 394	emb CAA27137.1	6740	2	274	100	100	HCQCF55	Lambda ZAP II
2464	HCRMV87R	GTP BINDING PROTEIN (FRAGMENT). Length = 92	sp Q29222 Q29222	6741	260	328	83	88	HCRMV87	pSport1
2465	HWLWB88R			6742	1	108			HWLWB88	pSport1

2466	HODGF21R	(AF028832) Hsp89-alpha-delta-N [Homo sapiens] >sp O75322 O75322 HSP89-ALPHA-DELTA-N. Length = 539	gb AAC25497. 1	6743	3	242	94	94	HODGF21	Uni-ZAP XR
2467	HWLMC42R	non-histone protein HMG2 precursor [Sus scrofa] >pir A34719 A34719 nonhistone chromosomal protein HMG-2 - pig >sp I7741 HMG2_PIG HIGH MOBILITY GROUP PROTEIN HMG2 (HMG-2). {SUB 2-210} Length = 210	gb AAA31051. 1	6744	7	255	80	93	HWLMC42	pSport1
2468	HCRQJ58R	histamine H1 receptor [Homo sapiens] >dbj BA03319.1  histamine H1 receptor [Homo sapiens] >emb CAA54182.1  histamine H1 receptor [Homo sapiens] >emb CAA84380.1  Human histamine H1 receptor [Homo sapiens] >gb AAB95156.1  (AF026261) histamine H1 receptor [	dbj BAA05840 1	6745	29	478	93	93	HCRQJ58	pSport1
2469	HCRQC27R	histone H2A variant (AA 1-141) [Drosophila melanogaster] >emb CAA33555.1  histone H2A [Drosophila melanogaster] >pir S08118 S08118 histone H2A.vD - fruit fly (Drosophila melanogaster) >sp P08985 H2AV_DROME HISTONE H2A VARIANT. {SUB 2-141} >gb AAA72378.1	emb CAA3037 0.1	6746	135	224	81	89	HCRQC27	pSport1
2470	HWLXR58R	HMG-1 [Homo sapiens] >sp Q14321 Q14321 HMG- 1. Length = 215	dbj BAA09924 1	6747	1	384	100	100	HWLXR58	pSport1
2471	HMWHX32R	HsMcm6 [Homo sapiens] >sp Q14566 MCM6_HUMAN DNA REPLICATION LICENSING FACTOR MCM6 (P105MCM). Length = 821	dbj BAA12699 1	6748	1	180	100	100	HMWHX32	Uni-ZAP XR
2472	HCROW95R	HTI-4a 5'-region hypothetical 13K protein - human Length = 117	pir A56611 A5 6611	6749	317	3	83	84	HCROW95	pSport1
2473	HCYBO60R	HU-K4 [Homo sapiens] >sp Q92853 Q92853 HU- K4. Length = 437	gb AAB16799. 1	6750	25	387	74	76	HCYBO60	pBluescript SK-

2474	HE2BG62R	human gamma-glutamyl hydrolase [Homo sapiens] >gb AF03360.1 (AF147083) gamma-glutamyl hydrolase [Homo sapiens] >sp Q92820 GGH_HUMAN GAMMA- GLUTAMYL HYDROLASE PRECURSOR (EC 3.4.19.9) (GAMMA-GLU-X CARBOXYPEPTIDASE) (CONJUGASE) (GH). >sp AF03360 AAAF03360 G	gb AAC05579. 1	6751	187	336	88	94	HE2BG62	Uni-ZAP XR
2475	HCRMW12R	human homolog of DnaJ protein [Homo sapiens] Length = 397	dbj BAA02656 .1	6752	2	496	92	92	HCRMW12	pSport1
2476	HRDEK90R	human protein homologous to DROER protein [Homo sapiens] >gb AAC51172.1  enhancer of rudimentary homolog [Homo sapiens] >dbj BAA11118.1  Mer [Mus musculus] >gb AAC53105.1  enhancer of rudimentary homolog [Mus musculus] >gb AAF28892.1 AF124330_1 (AF124330)	dbj BAA12865 .1	6753	18	188	57	62	HRDEK90	Uni-ZAP XR
2477	HHBEF23R	hypothetical 18K protein - goldfish mitochondrion Length = 166	pir JC1348 JC1 348	6754	186	269	47	52	HHBEF23	pCMVSPORT 1
2478	HWLVF61R	HYPOTHETICAL PROTEIN (FRAGMENT). Length = 122	sp Q16465 YZ A1_HUMAN	6755	382	2	90	90	HWLVF61	pSport1
2479	HKCSR28R	hypothetical protein [Escherichia coli] >gb AAC73592.1 (AE000155) putative ATP- binding component of a transport system [Escherichia coli] >pir A64780 A64780 probable ABC transport protein ybbL - Escherichia coli >sp P77279 YBBL_ECOLI HYPOTHETICAL ABC TRAN	gb AAB40244. 1	6756	8	190	100	100	HKCSR28	pBluescript
2480	HWMBP47R	(AL021682) unnamed protein product [Homo sapiens] >sp Q43788 Q43788 CDNA MAPPING TO 22Q13. Length = 287	emb CAA1667 0.1	6757	1	171	84	84	HWMBP47	pSport1
2481	HWMBG58R	(AF106966) I3 protein [Homo sapiens] >sp O95415 O95415 I3 PROTEIN. Length = 125	gb AAD05167. 1	6758	446	333	91	91	HWMBG58	pSport1

2482	HCRMF92R	IEF 7442 [Homo sapiens] >gb AAC50231.1  retinoblastoma-binding protein RbAp46 [Homo sapiens] >gb AAC36349.1  (AF090306) retinoblastoma binding protein [Rattus norvegicus] >pir 39181 39181 G1/S transition control protein-binding protein RbAp46 - human >s	emb CAA5136 0.1	6759	240	368	67	74	HCRMF92	pSport1
2483	HWLQF89R	IEF 7442 [Homo sapiens] >gb AAC50231.1  retinoblastoma-binding protein RbAp46 [Homo sapiens] >gb AAC36349.1  (AF090306) retinoblastoma binding protein [Rattus norvegicus] >pir 39181 39181 G1/S transition control protein-binding protein RbAp46 - human >s	emb CAA5136 0.1	6760	3	263	92	92	HWLQF89	pSport1
2484	HWLOG90R	(AF103261) immunoglobulin heavy chain variable region [Homo sapiens] Length = 117 Ig kappa chain Am37 precursor - human Length = 216	gb AAD30821.1	6761	49	501	75	79	HWLOG90	pSport1
2485	HWLRV24R	Ig kappa chain Am37 precursor - human Length = 216	pir JE0241 JE0241	6762	2	241	81	81	HWLRV24	pSport1
2486	HWMCC54R	Ig kappa light chain (VJC) [Homo sapiens] >pir S40357 S40357 Ig kappa chain V-J-C region - human {SUB 1-136} >emb CAA61443.1  immunoglobulin anti-F(ab')2 variable region light chain [Homo sapiens] {SUB 21-132} Length = 137	emb CAA5113 5.1	6763	3	395	90	94	HWMCC54	pSport1
2487	HWLNK85R	(AF018265) immunoglobulin lambda light chain [synthetic construct] Length = 236	gb AAF21612.1	6764	2	208	84	86	HWLNK85	pSport1
2488	HCQAV48R	IG light chain variable region (VJ) [Homo sapiens] >pir S38643 S38643 Ig kappa chain V region - human (fragment) >pir S46369 S46369 IG light chain variable region (VJ) - human {SUB 6-134} >pir A25521 A25521 Ig kappa chain V region (321) - human (fragment)	emb CAA8169 4.1	6765	1	243	78	78	HCQAV48	Lambda ZAP II
2489	HWMCM79R	immunoglobulin kappa-chain [Homo sapiens] Length = 104	gb AAA02610.1	6766	78	209	55	62	HWMCM79	pSport1

2490	HCQAS76R	immunoglobulin variable chain lambda [Homo sapiens] >pir[S04519]S04519 Ig lambda chain precursor V-II region (2.1) - human (fragment) Length = 118	emb CAA3277 0.1	6767	3	170	74	76	HCQAS76	Lambda ZAP II
2491	HKLRA71R	(AF038143) immunoglobulin lambda-2b light chain variable region [Ovis aries] Length = 118	gb AAB94909. 1	6768	2	223	47	55	HKLRA71	pBluescript
2492	HWMCI58R	IgG [Homo sapiens] Length = 476	gb AAA02914. 1	6769	2	508	70	83	HWMCI58	pSport1
2493	HWLMJ20R	immunoglobulin gamma heavy chain [Homo sapiens] Length = 134	emb CAA6740 6.1	6770	2	247	69	79	HWLMJ20	pSport1
2494	HWLMZ25R	(AB019438) immunoglobulin heavy chain variable region [Homo sapiens] Length = 119	dbj BAA75031 1	6771	1	423	91	95	HWLMZ25	pSport1
2495	HKLRB13R	(AJ010444) immunoglobulin kappa light chain [Homo sapiens] Length = 210	emb CAA0918 3.1	6772	3	356	85	91	HKLRB13	pBluescript
2496	HWLMU79R	immunoglobulin kappa light chain [Homo sapiens] Length = 236	emb CAA6506 1.1	6773	3	443	88	95	HWLMU79	pSport1
2497	HKLSA25R	immunoglobulin kappa light chain variable region [Homo sapiens] Length = 106	gb AAA71907. 1	6774	1	477	57	68	HKLSA25	pBluescript
2498	HWLNN06R	(AF018265) immunoglobulin lambda light chain [synthetic construct] Length = 236	gb AAF21612. 1	6775	2	484	74	76	HWLNN06	pSport1
2499	HWLMM42R	immunoglobulin lambda heavy chain [Homo sapiens] >gb AAF14196.1  (AF107231) immunoglobulin heavy chain variable region [Homo sapiens] {SUB 20-147} Length = 477	emb CAA7503 2.1	6776	242	433	75	75	HWLMM42	pSport1
2500	HWMBC38R	(AF063771) immunoglobulin lambda light chain variable region [Homo sapiens] Length = 108	gb AAC16848. 1	6777	3	455	70	80	HWMBC38	pSport1
2501	HWLVU11R	immunoglobulin lambda-chain subgroup II [Homo sapiens] >dbj BAA20002.1  V1-5 [Homo sapiens] {SUB 20-118} Length = 118	gb AAB00166. 1	6778	1	402	69	69	HWLVU11	pSport1
2502	HCQAM96R	This CDS feature is included to show the translation of the corresponding V_region. Presently translation qualifiers on V_region features are illegal [Homo sapiens] Length = 139	gb AAA52938. 1	6779	1	174	38	50	HCQAM96	Lambda ZAP II

2503	HCQCE43R				6780	133	26			HCQCE43	Lambda ZAP II
2504	HCQCG90R				6781	139	2			HCQCG90	Lambda ZAP II
2505	HCQCK29R				6782	107	3			HCQCK29	Lambda ZAP II
2506	HCQCU15R				6783	97	2			HCQCU15	Lambda ZAP II
2507	HCQDW78R				6784	134	24			HCQDW78	Lambda ZAP II
2508	HCQDW90R				6785	109	2			HCQDW90	Lambda ZAP II
2509	HCYBM34R				6786	109	2			HCYBM34	pBluescript SK-
2510	HCYBM57R				6787	134	6			HCYBM57	pBluescript SK-
2511	HKLAA14R				6788	148	2			HKLAA14	Lambda ZAP II
2512	HCQCK49R				6789	114	22			HCQCK49	Lambda ZAP II
2513	HWLMU27R	initiation factor 4D [Homo sapiens] >gb AAA86989.1 eIF-5A [Homo sapiens] >pir B31486 FTHUA translation initiation factor eIF-5A - human >sp P10159 IF5A_HUMAN INITIATION FACTOR 5A (EIF-5A) (EIF-4D) (REV BINDING FACTOR). {SUB 2-154} Length = 154	gb AAA58453.1		6790	2	139	97	97	HWLMU27	pSport1
2514	HWLUR23R	insulin-like growth factor binding protein 5 [Homo sapiens] >gb AAA72051.1  [Human insulin-like growth factor binding protein 5 (IGFBP5) gene], gene product [Homo sapiens] >gb AAC09368.1  (AF055033) insulin-like growth factor binding protein 5 [Homo sapie	gb AAA53505.1		6791	43	366	95	95	HWLUR23	pSport1
2515	HWLRQ41R	interferon-dependent positive-acting transcription factor ISGF-3 91K chain - human Length = 739	pir A46159 A46159		6792	53	211	86	88	HWLRQ41	pSport1



2516	HWLOC77R	interferon-gamma [Homo sapiens] >gb AAA53230.1  interferon-gamma [Homo sapiens] >gb AAF02217.1 AF078829_1 (AF078829) protease activator PA28 alpha [Homo sapiens] >pir A54859 A54859 proteasome activator PA28 alpha chain - human >sp Q06323 IGUP_HUMAN INTE	gb AAA16521.1  1	6793	1	294	100	100	HWLOC77	pSport1
2517	HDDNQ21R	interferon-inducible protein [Homo sapiens] >sp P13164 INJ9_HUMAN INTERFERON- INDUCIBLE PROTEIN 9-27 (LEU-13 ANTIGEN). Length = 125	emb CAA5933 7.1	6794	1	408	98	98	HDDNQ21	pSport1
2518	HCQDS58R	Interleukin 15 [Homo sapiens] >emb CAA62616.1  interleukin-15 [Homo sapiens] >sp P40933 IL15_HUMAN INTERLEUKIN-15 PRECURSOR (IL-15). Length = 162	gb AAA21551.1  1	6795	298	384	58	66	HCQDS58	Lambda ZAP II
2519	HCQDA89R	IP63 protein [Rattus norvegicus] >sp O55160 O55160 IP63 PROTEIN. Length = 571	emb CAA6770 5.1	6796	187	330	74	82	HCQDA89	Lambda ZAP II
2520	HCQCO43R	J (tail: host specificity; 1132) [bacteriophage lambda] >pir D43009 QSBPL host specificity protein J - phage lambda >sp P03749 VHSJ_LAMBD HOST SPECIFICITY PROTEIN J. Length = 1132	gb AAA96553.1  1	6797	1	180	96	98	HCQCO43	Lambda ZAP II
2521	HCQCG73R	KHS1 [Homo sapiens] >sp Q9Y4K4 Q9Y4K4 KHS1. Length = 846	gb AAB48435.1  1	6798	2	328	97	97	HCQCG73	Lambda ZAP II
2522	HWLQA92R	KIAA0007 [Homo sapiens] >sp Q92577 Q92577 MYELOBLAST KIAA0007 (FRAGMENT). Length = 459	dbj BAA13441.1  1	6799	2	208	65	69	HWLQA92	pSport1
2523	HCROO70R	KIAA0036 [Homo sapiens] >sp Q15051 Y036_HUMAN HYPOTHETICAL PROTEIN KIAA0036. Length = 598	dbj BAA04968.1  1	6800	252	413	86	88	HCROO70	pSport1
2524	HCRNL15R			6801	108	233			HCRNL15	pSport1
2525	HCR0M41R	KIAA0061 [Homo sapiens] >sp Q15037 Q15037 KIAA0061 PROTEIN (FRAGMENT). Length = 903	dbj BAA06543.1  1	6802	3	524	98	98	HCR0M41	pSport1

2526	H2LAA02R	KIAA0158 gene product is related to Drosophila Drlf6 protein. [Homo sapiens] >gb AAB92377.1  (AF038404) homolog of Nedd5; hNedd5 [Homo sapiens] >sp Q15019 NED5_HUMAN NEDD5 PROTEIN HOMOLOG (KIAA0158). >gb AAD12225.1  (AC005104) KIAA0158; similar to human N	dbj BAA09928.1	6803	122	487	98	98	H2LAA02	pBluescript SK-
2527	H2CBC43R	kinesin-like spindle protein HKSP [Homo sapiens] >pir G02157 G02157 kinesin-like spindle protein HKSP - human Length = 1056	gb AAA86132.1	6804	65	409	82	83	H2CBC43	pBluescript SK-
2528	HCQDU29R			6805	17	73			HCQDU29	Lambda ZAP II
2529	HWMBH25R	lactate dehydrogenase B [Homo sapiens] >emb CAA68701.1  lactate dehydrogenase B (AA 1 - 334) [Homo sapiens] >pir S02795 DEHULH L- lactate dehydrogenase (EC 1.1.1.27) chain H - human >sp p07195 LDHH_HUMAN L-LACTATE DEHYDROGENASE H CHAIN (EC 1.1.1.27) (LDH-B	emb CAA3203.3.1	6806	3	440	96	96	HWMBH25	pSport1
2530	HWMBW89R			6807	3	527			HWMBW89	pSport1
2531	HCYBK06R			6808	11	148			HCYBK06	pBluescript SK-
2532	HWMCL19R	Ig kappa light chain (VJC) [Homo sapiens] >emb CAB75876.1  (A1272080) immunoglobulin light chain variable region [Homo sapiens] {SUB 14-131; >gb AAD16547.1  (AF103376) immunoglobulin kappa light chain variable region [Homo sapiens] {SUB 22-122} >pir S3409	emb CAA5112.0.1	6809	3	275	95	98	HWMCL19	pSport1
2533	HCRM39R	lumican [Homo sapiens] >sp P51884 LUM_HUMAN LUMICAN PRECURSOR (LUM) (KERATAN SULFATE PROTEOGLYCAN). Length = 338	gb AAA85268.1	6810	3	413	65	65	HCRM39	pSport1

2534	HWMBJ73R	lymphocyte antigen [Homo sapiens] >gb AAA59613.1 HLA-A31 precursor [Homo sapiens] >gb AAB05976.1 lymphocyte antigen [Homo sapiens] >pir I72170 I72170 MHC class I histocompatibility antigen HLA-A31 alpha chain (allele A*31012) precursor - human >sp P1618	gb AAA59599.1	6811	3	428	85	85	HWMBJ73	pSport1
2535	HWLVE15R	M1 subunit of ribonucleotide reductase [Homo sapiens] >emb CAA42180.1 large subunit ribonucleotide reductase [Homo sapiens] >pir S16680 S16680 ribonucleoside-diphosphate reductase (EC 1.17.4.1) chain M1 - human >sp P2392 IRI1_HUMAN RIBONUCLEOSIDE-DIPHOS	emb CAA42118.1	6812	3	392	96	96	HWLVE15	pSport1
2536	HCRMD64RA	MDA-7 [Homo sapiens] >sp Q13007 MDA7_HUMAN MDA-7 PROTEIN PRECURSOR (MELANOMA DIFFERENTIATION ASSOCIATED PROTEIN 7). Length = 206	gb AAA91780.1	6813	3	185	96	96	HCRMD64	pSport1
2537	HCRNO44R	(AL117452) hypothetical protein [Homo sapiens] >emb CAB55934.1 (AL117452) hypothetical protein [Homo sapiens] >pir T17244 T17244 hypothetical protein DKFZp586G1517.1 - human (fragment) >sp CAB55934 CAB55934 Hypothetical 99.4 kd protein (fragment). >emb C	emb CAB55934.1	6814	299	514	78	78	HCRNO44	pSport1
2538	HNBTK71R	membrane protein [Homo sapiens] >emb CAA42708.1 MRP-1 (motility related protein) [Homo sapiens] >gb AAA80320.1 CD9 antigen [Homo sapiens] >gb AAC60586.1 CD9 antigen [human, leukocytes, Peptide, 228 aa] [Homo sapiens] >pir A46123 A40402 CD9 antigen - hu	gb AAA59982.1	6815	2	628	91	91	HNBTK71	pSport1

2539	HCROL22R	membrane protein with histidine rich charge clusters [Homo sapiens] >gb AAD12305.1  (AF117221) KE4 protein [Homo sapiens] >sp Q92504 Q92504 MEMBRANE PROTEIN WITH HISTIDINE RICH CHARGE CLUSTERS. Length = 429	dbj BAA11528.1	6816	3	371	45	47	HCROL22	pSport1
2540	HWLV152R	metalloproteinase inhibitor precursor [Homo sapiens] >gb AAAG1186.1  metalloproteinase-2 inhibitor precursor [Homo sapiens] >gb AAB19474.1  tissue inhibitor of metalloproteinase 2, TIMP-2 {EC 3.4.24.-} [human, Peptide, 220 aa] [Homo sapiens] >pir A37128 A	gb AAA59581.1	6817	3	413	100	100	HWLV152	pSport1
2541	HSAMD89R	non-muscle alpha tropomyosin [Rattus norvegicus] >sp Q63582 Q63582 NON-MUSCLE ALPHA TROPOMYOSIN. Length = 284	gb AAA21805.1	6818	3	476	73	75	HSAMD89	pSport1
2542	HCQDI65R	mitochondrial ATP synthase subunit 9 precursor [Homo sapiens] >pir 38612 38612 H+-transporting ATP synthase (EC 3.6.1.34) lipid-binding protein P3 precursor, mitochondrial - human >sp P48201 AT93_HUMAN ATP SYNTHASE LIPID-BINDING PROTEIN P3 PRECURSOR (EC	gb AAA78807.1	6819	112	222	96	96	HCQDI65	Lambda ZAP II
2543	HCROE42R	(AF184344) DNA polymerase accessory subunit precursor [Homo sapiens] >sp AAD56542 AAD56542 DNA polymerase accessory subunit precursor. Length = 485	gb AAD56542.1 AF1843	6820	3	551	80	82	HCROE42	pSport1
2544	HCROI80R	mitochondrial intermediate peptidase precursor [Homo sapiens] >sp Q99797 PMIP_HUMAN MITOCHONDRIAL INTERMEDIATE PEPTIDASE PRECURSOR (EC 3.4.24.59) (MIP). Length = 713	gb AAC51231.1	6821	149	475	68	68	HCROI80	pSport1

2545	HCWHT65R	mitochondrial intermediate peptidase precursor [Homo sapiens] >sp Q99797 PMIP_HUMAN MITOCHONDRIAL INTERMEDIATE PEPTIDASE PRECURSOR (EC 3.4.24.59) (MIP). Length = 713	gb AAC51231.1	6822	1	432	70	74	HCWHT65	ZAP Express
2546	HCRMX32R			6823	1	300			HCRMX32	pSport1
2547	HCROE77R	MT-HSP75 [Homo sapiens] >sp P38646 GR75_HUMAN MITOCHONDRIAL STRESS-70 PROTEIN PRECURSOR (75 KD GLUCOSE REGULATED PROTEIN) (GRP 75) (PEPTIDE-BINDING PROTEIN 74) (PBP74) (MORTALIN) (MOT). Length = 679	gb AAA67526.1	6824	3	329	93	93	HCROE77	pSport1
2548	HCRMX69R	multifunctional protein CAD [Homo sapiens] >sp P27708 PYR1_HUMAN CAD PROTEIN [INCLUDES: GLUTAMINE-DEPENDENT CARBAMOYL-PHOSPHATE SYNTHASE (EC 6.3.5.5); ASPARTATE CARBAMOYLTRANSFERASE (EC 2.1.3.2); DIHYDROOROTASE (EC 3.5.2.3)]. >gb AAA51907.1  CAD [Homo sap	dbj BAA11423.1	6825	1	144	93	93	HCRMX69	pSport1
2549	HCQDH45R	myosin I heavy chain isoform [Gallus gallus] >sp Q02440 MYSD_CHICK DILUTE MYOSIN HEAVY CHAIN, ISOFORM I (MYOSIN HEAVY CHAIN P190) (MYOSIN-V). Length = 1829	emb CAA4767.3.1	6826	106	312	86	88	HCQDH45	Lambda ZAP II
2550	HOCTA19R	myosin II nonmuscle [Rana catesbeiana] >sp Q91304 Q91304 MYOSIN II NONMUSCLE (FRAGMENT). Length = 261	gb AAA65087.1	6827	217	504	80	92	HOCTA19	pSport1
2551	HWLRA67R	myosin regulatory light chain [Homo sapiens] >pir S11493 MOHULP myosin regulatory light chain, placental - human >sp P19105 MLRM_HUMAN MYOSIN REGULATORY LIGHT CHAIN 2, NONSARCOMERIC (MYOSIN RLC). {SUB 2- 171} Length = 171	emb CAA3820.1.1	6828	1	117	68	78	HWLRA67	pSport1

2552	HWLOM88R	(AF132021) myosin X [Homo sapiens] >gb AAFI17363.1 AF184153_1 (AF184153) myosin X [Homo sapiens] (SUB 347-495) Length = 1540	gb AAF36524.1 AF1320	6829	2	409	69	70	HWLOM88	pSport1
2553	H2CBI14R	myosin heavy chain 12 [Homo sapiens] >sp CAA69036 CAA69036 Myosin heavy chain 12. Length = 1828	emb CAA69036.1	6830	2	208	60	76	H2CBI14	pBluescript SK-
2554	HCRNI08R	N-acetylglucosaminyltransferase V [Homo sapiens] >gb AAD22449.1 AF113921_1 (AF113921) alpha-1,3(6)-mannosylglycoprotein beta-1,6-N-acetylglucosaminyltransferase [Homo sapiens] >pir JC2074 JC2074 alpha-1,3(6)-mannosylglycoprotein beta-1,6-N-acetylglucosa	dbj BAA04570.1	6831	1	537	88	88	HCRNI08	pSport1
2555	HFPBS29R	NAD+-isocitrate dehydrogenase, gamma subunit [Macaca fascicularis] >pir S39065 S39065 isocitrate dehydrogenase (NAD+) (EC 1.1.1.41) gamma chain precursor - crab-eating macaque (fragment) >sp P41564 IDHG_MACFA ISOCITRATE DEHYDROGENASE [NAD] SUBUNIT GAMMA,	emb CAA52224.1	6832	1	183	97	100	HFPBS29	Uni-ZAP XR
2556	HCQDL50R			6833	128	226			HCQDL50	Lambda ZAP II
2557	HCQCB43R	NADH dehydrogenase subunit 2 [Homo sapiens] >dbj BAA07291.1  NADH dehydrogenase subunit 2 [Homo sapiens] >sp Q34769 Q34769 NADH DEHYDROGENASE SUBUNIT 2. Length = 347	dbj BAA07291.1	6834	27	113	40	43	HCQCB43	Lambda ZAP II
2558	HCQDA51R	NADH dehydrogenase subunit 2 [Homo sapiens] >dbj BAA07291.1  NADH dehydrogenase subunit 2 [Homo sapiens] >sp Q34769 Q34769 NADH DEHYDROGENASE SUBUNIT 2. Length = 347	dbj BAA07291.1	6835	260	322	41	43	HCQDA51	Lambda ZAP II

2559	HCQDB27R	NADH dehydrogenase subunit 2 [Homo sapiens] >dbj BAA07291.1  NADH dehydrogenase subunit 2 [Homo sapiens] >sp Q34769 Q34769 NADH DEHYDROGENASE SUBUNIT 2. Length = 347	dbj BAA07291 .1	6836	23	109	58	63	HCQDB27	Lambda ZAP II
2560	HCQDS85R	NADH dehydrogenase subunit 2 [Homo sapiens] >dbj BAA07291.1  NADH dehydrogenase subunit 2 [Homo sapiens] >sp Q34769 Q34769 NADH DEHYDROGENASE SUBUNIT 2. Length = 347	dbj BAA07291 .1	6837	284	451	43	49	HCQDS85	Lambda ZAP II
2561	HCQCR82R	NADH dehydrogenase subunit 3 [Homo sapiens] >dbj BAA77672.1  NADH dehydrogenase subunit 3 [Homo sapiens] >sp BAA77672 BAA77672 NADH dehydrogenase subunit 3. >gb AAB63453.1  (AF004342) NADH dehydrogenase III [Homo sapiens] {SUB 10-115} >dbj BAA76519.1  (AB	dbj BAA77672 .1	6838	48	206	90	100	HCQCR82	Lambda ZAP II
2562	HCQDV94R	NADH dehydrogenase subunit 4 [Homo sapiens] >dbj BAA77673.1  NADH dehydrogenase subunit 4 [Homo sapiens] >sp BAA77673 BAA77673 NADH dehydrogenase subunit 4. Length = 459	dbj BAA77673 .1	6839	174	323	72	75	HCQDV94	Lambda ZAP II
2563	HCQCT16R			6840	2	49			HCQCT16	Lambda ZAP II
2564	HCQDA65R	neutrophil gelatinase associated lipocalin [Homo sapiens] >sp P80188 NGAL_HUMAN NEUTROPHIL GELATINASE-ASSOCIATED LIPOCALIN PRECURSOR (NGAL) (P25) (25 KD ALPHA-2-MICROGLOBULIN-RELATED SUBUNIT OF MMP-9) (LIPOCALIN-2) (ONCOGENE 24P3). >gb AAD14168.1 S75256_1	emb CAA5812 7.1	6841	2	457	89	89	HCQDA65	Lambda ZAP II

2565	HWLWH33R	neutrophil gelatinase associated lipocalin [Homo sapiens] >sp P80188 NGAL_HUMAN NEUTROPHIL GELATINASE-ASSOCIATED LIPOCALIN PRECURSOR (NGAL) (P25) (25 KD ALPHA-2-MICROGLOBULIN-RELATED SUBUNIT OF MMP-9) (LIPOCALIN-2) (ONCOGENE 24P3). >gb AAD14168.1 S75256_1 (AF043542) nucleoside diphosphate kinase [Gallus gallus] >sp O57535 O57535 NUCLEOSIDE DIPHOSPHATE KINASE. Length = 153	emb CAA5812 7.1	6842	200	547	90	91	HWLWH33	pSport1
2566	HCYBJ83R		gb AAB99856. 1	6843	285	494	81	86	HCYBJ83	pBluescript SK-
2567	HWLRE17R	nuclear autoantigen [Homo sapiens] >pir A37244 A37244 nuclear autoantigen Sp-100 - human Length = 480	gb AAA35537. 1	6844	2	415	73	73	HWLRE17	pSport1
2568	H2LAC53R	nucleophosmin [Homo sapiens] >gb AAA36385.1  nucleolar protein B23 [Homo sapiens] >gb AAA58386.1  nucleolar phosphoprotein B23 [Homo sapiens] >gb AAB94739.1  nucleophosmin phosphoprotein [Homo sapiens] >pir A33423 A32915 nucleophosmin - human >sp P06748 N	gb AAA36380. 1	6845	1	399	86	87	H2LAC53	pBluescript SK-
2569	HWLQM10R	nucleolin [Homo sapiens] >pir A35804 A35804 nucleolin - human >sp P19338 NUCL_HUMAN NUCLEOLIN (PROTEIN C23). {SUB 2-707} Length = 707	gb AAA59954. 1	6846	1	438	96	97	HWLQM10	pSport1
2570	HWLQO29R	ORF [Pan troglodytes] >sp Q28808 IN12_PANTR INTERFERON-INDUCED PROTEIN 6-16 PRECURSOR (IFI-6-16). Length = 130	dbj BAA01980 1.1	6847	3	332	76	76	HWLQO29	pSport1
2571	H2LBA48R	ORF YNL040w [Saccharomyces cerevisiae] >pir S62962 S62962 hypothetical protein YNL040w - yeast (Saccharomyces cerevisiae) >sp P53960 YNE0_YEAST HYPOTHETICAL 51.0 KD PROTEIN IN YIP3-TFC5 INTERGENIC REGION. Length = 456	emb CAA9590 7.1	6848	172	432	41	63	H2LBA48	pBluescript SK-



2572	HCRPZ16R	(AL033502) hypothetical protein [Candida albicans] >sp O94058 O94058 HYPOTHETICAL 85.6 KD PROTEIN. Length = 747	emb CAA2200 9.11	6849	294	659	38	64	HCRPZ16	pSport1
2573	HKCSA80R	ORF1 [Escherichia coli] Length = 334	gb AAA72122. 11	6850	245	3	66	69	HKCSA80	pBluescript
2574	HCQBD02R	ORF11 [Homo sapiens] >sp Q14754 Q14754 ORF11. Length = 712	emb CAA3648 0.11	6851	2	145	54	72	HCQBD02	Lambda ZAP II
2575	HCRPH64R	ornithine decarboxylase antizyme [Homo sapiens] Length = 228	dbj BAA13497 .11	6852	2	193	97	97	HCRPH64	pSport1
2576	HDTBZ03R	OS9 [Homo sapiens] Length = 474	gb AAC39523. 11	6853	2	319	83	83	HDTBZ03	pCMVSPORT 2.0
2577	HLIED39R	peptidylprolyl isomerase [Homo sapiens]		6854	216	347			HLIED39	pSport1
2578	HCQCB85R	>emb CAA68264.1  cyclophilin (AA 1-165) [Homo sapiens] >gb AAB81959.1  (AF023859) cyclophilin A [Papio hamadryas] >gb AAB81960.1  (AF023860) cyclophilin A [Cercopithecus aethiops] >gb AAB81961.1  (AF023861) cyclophi	emb CAA3703 9.11	6855	1	246	97	98	HCQCB85	Lambda ZAP II
2579	HCRME24R	perforin [Homo sapiens] >gb AAA60167.1  perforin [Homo sapiens] >pir A45816 A37181 perforin 1 precursor - human >sp P14222 PERF_HUMAN PERFORIN 1 PRECURSOR (P1) (LYMPHOCYTE PORE FORMING PROTEIN) (PFP) (CYTOLYSIN). Length = 555	gb AAA60065. 11	6856	35	130	53	56	HCRME24	pSport1
2580	HWLQK64R	PEX5p [Mus musculus] >sp O09012 PEX5_MOUSE PEROXISOMAL TARGETING SIGNAL 1 RECEPTOR (PEROXISOMAL RECEPTOR 1) (PEROXISOMAL C-TERMINAL TARGETING SIGNAL IMPORT RECEPTOR) (PTS1-BP) (PEROXIN-5) (PTS1 RECEPTOR) (PXRIP) (PTS1R). Length = 639	emb CAB0969 4.11	6857	445	239	63	73	HWLQK64	pSport1

2581	HCRNF48R	phosphate carrier protein [Homo sapiens] >emb CAB56612.1  phosphate carrier [Homo sapiens] >pir B53737 B53737 phosphate carrier protein, form B - human >sp CAB56612 CAB56612 Phosphate carrier. Length = 361	emb CAA4264 1.1	6858	3	383	78	78	HCRNF48	pSport1
2582	HCQDL14R	phosphofructokinase [Oryctolagus cuniculus] >pir A26550 KIRBF 6-phosphofructokinase (EC 2.7.1.11), muscle - rabbit >sp P00511 K6PF_RABIT 6-PHOSPHOFRUCTOKINASE, MUSCLE TYPE (EC 2.7.1.11) (PHOSPHOFRUCTOKINASE 1) (PHOSPHOHEXOKINASE) (PHOSPHOFRUCTO-1-KINASE 1	gb AAA31441. 1	6859	1	339	77	83	HCQDL14	Lambda ZAP II
2583	HWLQA11R	phosphorylation regulatory protein HP-10 - human Length = 492	pir A61382 A6 1382	6860	48	257	69	72	HWLQA11	pSport1
2584	HCYBH73R	plakophilin 2a [Homo sapiens] >sp Q99960 Q99960 PLAKOPHILIN 2A. Length = 837	emb CAA6626 5.1	6861	3	269	75	78	HCYBH73	pBluescript SK-
2585	HCQCJ88R	fusion protein [Homo sapiens] >gb AAD13865.1 1680464_1 promyelocytic leukemia protein [Homo sapiens] {SUB 220-333} Length = 744	gb AAA59972. 1	6862	3	272	88	88	HCQCJ88	Lambda ZAP II
2586	HWLXJ34R	PRAJA1 [Mus musculus] >sp O55176 O55176 PRAJA1. Length = 424	gb AAC00205. 1	6863	3	416	83	86	HWLXJ34	pSport1
2587	HOCTB09R	C9 complement protein [Homo sapiens] Length = 557	gb AAA51889. 1	6864	1	477	92	94	HOCTB09	pSport1
2588	HCRQN67R	precursor polypeptide (AA -23 to 1120) [Homo sapiens] >gb AAD15273.1  T200 glycoprotein [Homo sapiens] >sp Q16614 Q16614 T200 LEUKOCYTE COMMON ANTIGEN (CD45, LC-A) PRECURSOR (EC 3.1.3.48) (CD45, LC-A). Length = 1143	emb CAA6826 9.1	6865	3	260	100	100	HCRQN67	pSport1
2589	HCYBH30R	(AF113123) carbonyl reductase [Homo sapiens] >sp AAF14864 AAF14864 Carbonyl reductase. Length = 244	gb AAF14864. 1 AAF1131	6866	292	450	79	82	HCYBH30	pBluescript SK-

2590	HCRNO04R	preprocathepsin B [Homo sapiens] >pir A26498 KHHUB cathepsin B (EC 3.4.22.1) precursor - human >sp P07858 CATB_HUMAN CATHEPSIN B PRECURSOR (EC 3.4.22.1) (CATHEPSIN B1) (APP SECRETASE). Length = 339	gb AAA52129.1	6867	3	104	96	96	HCRNO04	pSport1
2591	HWLRC47R			6868	3	236			HWLRC47	pSport1
2592	HCROE26R	prostacyclin-stimulating factor, PG12-stimulating factor, PSF [human, cultured diploid fibroblast cells, Peptide, 282 aa] [Homo sapiens] >pir S50031 S50031 prostacyclin-stimulating factor - human >sp Q16270 Q16270 PROSTACYCLIN-STIMULATING FACTOR. Length =	gb AAB32370.1	6869	3	260	86	86	HCROE26	pSport1
2593	HOHBE57R	protein kinase [Homo sapiens] >sp Q92631 Q92631 PROTEIN KINASE (FRAGMENT). Length = 240	emb CAA7048.8.1	6870	59	535	76	84	HOHBE57	pCMVSPORT 2.0
2594	HCROK02R	protein phosphatase 2A alpha catalytic subunit (AA 1-309) [Bos taurus] >emb CAA51381.1  protein phosphatase-2A [Bos taurus] >gb AAA30981.1  protein phosphatase 2A alpha subunit [Sus scrofa] >emb CAA29471.1  phosphatase (AA 1-309) [Oryctolagus cuniculus] >g	emb CAA3678.9.1	6871	2	310	98	98	HCROK02	pSport1
2595	HWMBB94R	protein tyrosine phosphatase [Homo sapiens] >gb AA66496.1  protein phosphatase [Homo sapiens] >sp Q16667 CDN3_HUMAN CYCLIN-DEPENDENT KINASE INHIBITOR 3 (EC 3.1.3.48) (EC 3.1.3.16) (CDK2- ASSOCIATED DUAL SPECIFICITY PHOSPHATASE) (KINASE ASSOCIATED PHOSPHA	gb AAA60222.1	6872	81	272	98	100	HWMBB94	pSport1

2596	HUVHA17R	focal adhesion kinase [Mus musculus] >pir A46166 A46166 protein-tyrosine kinase (EC 2.7.1.112) - mouse >sp P34152 FAK1_MOUSE FOCAL ADHESION KINASE 1 (EC 2.7.1.112) (FADK 1) (PP125FAK). Length = 1052	gb AAA37592.1	6873	174	443	91	95	HUVHA17	Uni-ZAP XR
2597	HLTIJ91R			6874	3	230			HLTIJ91	Uni-ZAP XR
2598	HCRMC40R	put. ORF [Homo sapiens] >pir A31026 A31026 probable membrane receptor protein - human >sp P08910 HPS1_HUMAN PROTEIN PHPS1-2. Length = 425	emb CAA3097.6.1	6875	2	160	100	100	HCRMC40	pSport1
2599	HKCSL44R	Q1Z 7F5 [Homo sapiens] >gb AAA36378.1  may code for Wilm's tumor-related protein [Homo sapiens] >gb AAA63253.1  Wilm's tumor-related protein [Homo sapiens] >gb AAB27665.1  QM [human, nontumorigenic Wilms' microcell hybrid cells, Peptide, 214 aa] [Homo	gb AAA36021.1	6876	37	288	66	69	HKCSL44	pBluescript
2600	HCOAR83R	sperm membrane protein BS-63 [Homo sapiens] >sp AAB41848 AAB41848 Sperm membrane protein BS-63. >sp Q99666 Q99666 BS-63. {SUB 1197- 1765} Length = 1765	gb AAB41848.2	6877	11	184	93	95	HCOAR83	Lambda ZAP II
2601	HWLQD31R	rapamycin- and FK506-binding protein [Homo sapiens] >pir JC1365 JC1365 FK506/rapamycin- binding protein FKBP13 precursor - human Length = 142	gb AAA36563.1	6878	2	250	97	97	HWLQD31	pSport1
2602	HOUDN78R	Rab5c protein [Canis familiaris] >pir S65933 S65933 GTP-binding protein Rab5c - dog >sp P51147 RB5C_CANFA RAS-RELATED PROTEIN RAB-5C. Length = 216	emb CAA8162.6.1	6879	2	307	48	52	HOUDN78	Uni-ZAP XR
2603	HOSBE19R	ras-related GTP-binding protein [Homo sapiens] Length = 184	dbj BAA11211.1	6880	161	367	70	74	HOSBE19	Uni-ZAP XR
2604	HCROB08R			6881	42	170			HCROB08	pSport1

2605	HWLQG37R	ribosomal protein [Homo sapiens] >emb CAA40328.1  ribosomal protein L38 [Rattus ratus] >pir S15658 RSRT38 ribosomal protein L38 - rat >pir S38385 S38385 ribosomal protein L38 - human >sp P23411 RL38_HUMAN 60S RIBOSOMAL PROTEIN L38. {SUB 2-70} >dbj BAA258	emb CAA8148 8.1	6882	205	387	60	60	HWLQG37	pSport1
2606	HSAMB82R	ribosomal protein L11 [Homo sapiens] >emb CAA44072.1  ribosomal protein L11 [Rattus ratus] >pir S17351 RSRT11 ribosomal protein L11 precursor - rat >sp P39026 RL11_HUMAN 60S RIBOSOMAL PROTEIN L11. {SUB 2-178} >dbj BAA25831.1  (AB007171) ribosomal protein	gb AAC15856. 1	6883	3	311	89	89	HSAMB82	pSport1
2607	HWLWE05R	ribosomal protein L21 [Homo sapiens] >gb AA85655.1  ribosomal protein L21 [Homo sapiens] >pir S55913 S55913 ribosomal protein L21, cytosolic - human >sp P46778 RL21_HUMAN 60S RIBOSOMAL PROTEIN L21. {SUB 2-160} >dbj BAA25835.1  (AB007176) ribosomal protei	emb CAA6158 2.1	6884	18	323	76	76	HWLWE05	pSport1
2608	HWLRB68R	ribosomal protein L23a [Homo sapiens] >gb AA35681.1  homology to rat ribosomal protein L23 [Homo sapiens] {SUB 10-156} Length = 156	gb AAA03341. 1	6885	1	465	100	100	HWLRB68	pSport1
2609	HWLMB86R	ribosomal protein L27 [Homo sapiens] >gb AAC15857.1  ribosomal protein L27 [Homo sapiens] >emb CAA30313.1  ribosomal protein L27 (AA 1 - 136) [Rattus norvegicus] >gb AAF25951.1  AF214527_1 (AF214527) ribosomal protein L27 [Mus musculus] >emb CAA40181.1  ri	gb AAA19815. 1	6886	39	149	85	85	HWLMB86	pSport1

2610	HWLQB60R	ribosomal protein L28 [Mus musculus] >pir I48738 I48738 ribosomal protein L28 - mouse >sp P41105 RL28_MOUSE 60S RIBOSOMAL PROTEIN L28. {SUB 2-137} Length = 137	emb CAA5284 8.1	6887	2	430	100	100	HWLQB60	pSport1
2611	HAIDT43R			6888	3	140			HAIDT43	Uni-ZAP XR
2612	H2LAU86R	ribosomal protein L34 [Homo sapiens] >pir I68524 I68524 ribosomal protein L34 - human >sp P49207 RL34_HUMAN 60S RIBOSOMAL PROTEIN L34. {SUB 2-117} Length = 117	gb AAC41916. 1	6889	1	477	98	99	H2LAU86	pBluescript SK-
2613	HCQDU05R	(AF013215) ribosomal protein S2 [Bos taurus] >sp O18789 RS2_BOVIN 40S RIBOSOMAL PROTEIN S2 (FRAGMENT). Length = 286	gb AAB63437. 1	6890	3	197	96	96	HCQDU05	Lambda ZAP II
2614	HCRPM16R	ribosomal protein S26 [Homo sapiens] >dbj BAA25824.1  (AB007161) ribosomal protein S26 [Homo sapiens] {SUB 62-106} >emb CAA55818.1  ribosomal protein S26 [Homo sapiens] {SUB 1-20} >dbj BAA25823.1  (AB007160) ribosomal protein S26 [Homo sapiens] {SUB 38-60}	emb CAA4934 5.1	6891	3	362	100	100	HCRPM16	pSport1
2615	HWLQA31R	ribosomal protein S29 [Bos taurus] >gb AA85661.1  ribosomal protein S29 [Homo sapiens] >gb AAB27426.1  homologous to antisense sequence of krev-1, anti oncogene [Homo sapiens] >emb CAA41778.1  ribosomal protein S29 [Rattus norvegicus] >gb AAB27429.1  S29	gb AAB06757. 1	6892	1	240	87	90	HWLQA31	pSport1

2616	HFVKA92R	ribosomal protein S6 [Homo sapiens] >emb CAA47719.1 ribosomal protein S6 [Homo sapiens] >gb AAA42079.1 ribosomal protein S6 [Rattus norvegicus] >emb CAA68430.1 ribosomal protein S6 [Mus musculus] >emb CAA90936.1 rpS6 [Mus musculus] >pir JC1394 R3HU6 r	gb AAA60289.1	6893	3	257	83	87	HFVKA92	pBluescript
2617	HKLSA82R	Rieske Fe-S protein [Homo sapiens] >sp P47985 UCR1_HUMAN_UBIQUINOL-CYTOCHROME C REDUCTASE IRON-SULFUR SUBUNIT, MITOCHONDRIAL PRECURSOR (EC 1.10.2.2) (RIESKE IRON-SULFUR PROTEIN) (RISP). Length = 274	gb AAC41754.1	6894	3	296	67	70	HKLSA82	pBluescript
2618	HKLSA88R	replication protein A complex 34 kd subunit homolog Rpa4 [Homo sapiens] >sp AAB08488 AAB08488 Replication protein A complex 34 kd subunit homolog Rpa4. Length = 261	gb AAB08488.2	6895	127	246	100	100	HKLSA88	pBluescript
2619	HWLNK27R	S-lac lectin [Homo sapiens] >gb AAA59513.1 S-lac lectin [Homo sapiens] >emb CAB42834.1  (AL022315) dJ117715.3 (Lectin, Galactose-binding, soluble, 2 (Galectin 2, S-Lac Lectin 2, HL14)) [Homo sapiens] >pir A38140 A38140 galectin 2 - human >sp P05162 LEG2_	gb AAA59512.1	6896	34	345	84	85	HWLNK27	pSport1
2620	HCRNT24R	S100P calcium-binding protein [Homo sapiens] >pir S24146 S24146 S-100 protein P - human >sp P25815 S10E_HUMAN S-100P PROTEIN. Length = 95	emb CAA4656.6	6897	27	299	81	81	HCRNT24	pSport1
2621	HCQAW95R	similar to product encoded by GenBank Accession number S62516 [Rattus norvegicus] >sp Q62742 Q62742 SA (FRAGMENT). Length = 106	gb AAA95995.1	6898	1	474	85	94	HCQAW95	Lambda ZAP II
2622	HWLMP89R	sarcolenmal associated protein-2 [Oryctolagus cuniculus] >sp Q28622 Q28622 SARCOLEMAL ASSOCIATED PROTEIN-2. Length = 402	gb AAA65596.1	6899	2	328	82	84	HWLMP89	pSport1

2623	HWLVA90R	SB beta-chain (1 is 2nd base in codon) [Homo sapiens] >sp Q14465 Q14465 SB BETA-CHAIN (CLONE PII-BETA-7) (FRAGMENT). >gb AAA3631.1  MHC HLA-SB beta chain [Homo sapiens] {SUB 48-234} >gb AAA59746.1  MHC DP-beta, allele DPB7 [Homo sapiens] {SUB 1-87} Leng	emb CAA2521 0.1	6900	3	278	86	94	HWLVA90	pSport1
2624	HKCSI14R	secretory protein [Homo sapiens] >gb AAA83628.1  intestinal trefoil factor [Homo sapiens] >pir A48284 A48284 intestinal trefoil factor 3 precursor - human >sp Q07654 ITF_HUMAN INTESTINAL TREFOIL FACTOR PRECURSOR (HP1.B). Length = 80	gb AAA59981. 1	6901	3	95	96	96	HKCSI14	pBluescript
2625	HFCE53R			6902	1	165			HFCE53	Uni-ZAP XR
2626	HCQCQ84R	serine protease [Homo sapiens] >sp O15393 TMS2_HUMAN TRANSMEMBRANE PROTEASE, SERINE 2 (EC 3.4.21.-). Length = 492	gb AAC51784. 1	6903	3	404	94	94	HCQCQ84	Lambda ZAP II
2627	HWLMV10R	serine/threonine protein kinase [Homo sapiens] >pir S32831 S32831 serine/threonine-specific protein kinase PCTAIRE-3 (EC 2.7.1.-) - human (fragment) >sp Q07002 KPT3_HUMAN SERINE/THREONINE PROTEIN KINASE PCTAIRE-3 (EC 2.7.1.-) (FRAGMENT). Length = 380	emb CAA4700 5.1	6904	3	155	78	78	HWLMV10	pSport1
2628	HWMBC92R	integrin binding protein kinase [Mus musculus] >sp O55222 O55222 INTEGRIN LINKED KINASE (INTEGRIN BINDING PROTEIN KINASE). Length = 452	gb AB94646. 1	6905	2	268	96	96	HWMBC92	pSport1



2629	HBJMM52R	seryl-tRNA synthetase [Homo sapiens] >pir[G01026 G01026 serine--tRNA ligase (EC 6.1.1.11) - human >sp P49591 SYS_HUMAN SERYL-TRNA SYNTHETASE (EC 6.1.1.11) (SERINE--TRNA LIGASE) (SERRS). >pir[S00490 S00490 RNA-binding protein, 62K - rabbit (fragment) {SUB	emb CAA6263 5.1	6906	1	333	73	74	HBJMM52	Uni-ZAP XR
2630	HCROZ52R			6907	2	115			HCROZ52	pSport1
2631	HWLQQ35R	similar to human DNA-binding protein 5. [Homo sapiens] >sp Q14673 Q14673 KIAA0164 PROTEIN. Length = 920	dbj BAA11481 .1	6908	3	413	75	76	HWLQQ35	pSport1
2632	HHMMF20R			6909	3	101			HHMMF20	pSport1
2633	HHEUW25R	similar to mouse Int-6 [Homo sapiens] >gb AAB88873.1  Int-6 [Homo sapiens] >gb AAC51760.1  eIF3-p48 [Homo sapiens] >gb AAC51919.1  mammary tumor-associated protein INT6 [Homo sapiens] >sp Q64252 IF36_HUMAN EUKARYOTIC TRANSLATION INITIATION FACTOR 3 SUBUNIT	gb AAB58251. 1	6910	1	336	98	98	HHEUW25	pCMVSPORT 3.0
2634	HCRNZ02R	sodium channel 2 [Homo sapiens] >sp P78349 P78349 SODIUM CHANNEL 2. Length = 528	gb AAB48981. 1	6911	3	344	89	91	HCRNZ02	pSport1
2635	HCQDT79R	Son of sevenless 1 [Rattus norvegicus] >sp Q9Z111 Q9Z111 SON OF SEVENLESS 1 (FRAGMENT). Length = 204	dbj BAA74949 .1	6912	119	361	84	92	HCQDT79	Lambda ZAP II
2636	HCQDL92R			6913	3	152			HCQDL92	Lambda ZAP II
2637	HWLVG33R	splicing factor [Homo sapiens] >emb CAA53512.1  gClq-R [Homo sapiens] >pir T0762 T0762 pre-mRNA splicing factor SF2 P32 chain precursor - human >sp Q07021 MA32_HUMAN COMPLEMENT COMPONENT 1, Q SUBCOMPONENT BINDING PROTEIN, MITOCHONDRIAL PRECURSOR (GLYCOP	gb AAA16315. 1	6914	3	377	67	68	HWLVG33	pSport1

2638	HCROO13R	(AF164515) Cps7G [Streptococcus suis] >sp AAFI18954 AAFI18954 Cps7G. Length = 404	gb AAFI18954.1 AF1645	6915	2	373	51	72	HCROO13	pSport1
2639	HCQDW65R	(AK001659) unnamed protein product [Homo sapiens] Length = 359	dbj BAA91818.1	6916	40	408	92	93	HCQDW65	Lambda ZAP II
2640	HCQCV70R	(AB012910) anti-HBsAg immunoglobulin Fab kappa chain [Homo sapiens] Length = 214	dbj BAA33580.1	6917	1	162	81	91	HCQCV70	Lambda ZAP II
2641	HCQDN27R	TAFII31 [Homo sapiens] >gb AAA91318.1  TBP-associated factor TAFII31 [Homo sapiens] >gb AAC50153.1  TAFII32 precursor [Homo sapiens] >pir 39141 39141 transcription factor TFIIID 32K chain TAFII32 - human >sp Q16594 T2D7_HUMAN TRANSCRIPTION INITIATION FAC	gb AAA84389.1	6918	143	448	91	93	HCQDN27	Lambda ZAP II
2642	HCQC192R	ribosomal protein L3 [Homo sapiens] >emb CAA18450.1  (AL022326) dJ333H23.1 (60S Ribosomal Protein L3) [Homo sapiens] >pir S34195 S34195 ribosomal protein L3, cytosolic - human >sp P39023 RL3_HUMAN 60S RIBOSOMAL PROTEIN L3 (HIV-1 TAR RNA BINDING PROTEIN B)	emb CAA5183.9.1	6919	2	220	90	91	HCQC192	Lambda ZAP II
2643	HCRMP36RA	tenascin [Homo sapiens] Length = 2199	emb CAA3962.8.1	6920	3	353	95	98	HCRMP36	pSport1
2644	HCROV67R	tenascin [Gallus gallus] >pir S27939 S27939 tensin - chicken Length = 1733	gb AAA49087.1	6921	5	397	55	62	HCROV67	pSport1
2645	HCROT79R	tesmin [Homo sapiens] >sp Q9Y415 Q9Y415 TESMIN. Length = 299	gb AAD24668.1 U86074	6922	2	160	100	100	HCROT79	pSport1
2646	H2CAA07R	(AJ012449) NS1-binding protein [Homo sapiens] >sp Q9Y480 Q9Y480 NS1-BINDING PROTEIN. Length = 619	emb CAA1002.9.1	6923	1	360	35	57	H2CAA07	pBluescript SK-
2647	H2LAD20R	The KIAA0146 gene product is novel. [Homo sapiens] >sp Q14159 Q14159 KIAA0146 PROTEIN (FRAGMENT). Length = 918	dbj BAA09767.1	6924	130	258	57	67	H2LAD20	pBluescript SK-

2648	HWLQZ32R	threonyl-tRNA synthetase [Homo sapiens] >pir A38867 YSHUT threonine--tRNA ligase (EC 6.1.1.3) - human >sp P26639 SYTC_HUMAN THREONYL-tRNA SYNTHETASE, CYTOPLASMIC (EC 6.1.1.3) (THREONINE-- TRNA LIGASE) (THRRS). Length = 712	gb AAB04939.1	6925	28	405	61	61	HWLQZ32	pSport1
2649	HKAOU89R	tissue factor precursor [Homo sapiens] Length = 295	gb AAA61151.1	6926	29	280	70	70	HKAOU89	pCMVSPORT 2.0
2650	HWLUO92R	tissue-specific secretory protein [synthetic construct] >emb CAA47928.1  orf [Homo sapiens] >gb AA67077.1  epididymal secretory protein precursor [Pan troglodytes] >emb CAA55013.1  epididymal secretory protein 14.6 [Macaca fascicularis] >pir I53929 I5392	emb CAA01431.1	6927	2	112	97	97	HWLUO92	pSport1
2651	HCROW19R	HNF-1 peptides [Rattus norvegicus] Length = 464	emb CAA37387.1	6928	1	147	90	90	HCROW19	pSport1
2652	HCRQK79R	transcription factor Sp-1 [Homo sapiens] >pir A29635 A29635 transcription factor Sp1 - human (fragment) >sp P08047 SP1_HUMAN TRANSCRIPTION FACTOR SP1 (FRAGMENT). Length = 696	gb AAA61154.1	6929	1	258	82	82	HCRQK79	pSport1
2653	HCQAD53R			6930	257	96			HCQAD53	Lambda ZAP II
2654	HKCUD58R	trypsinogen IV b-form [Homo sapiens] >sp Q15665 Q15665 TRYPSINOGEN IV B-FORM. Length = 259	emb CAA50484.1	6931	45	323	80	81	HKCUD58	pBluescript
2655	HCRNR93R	TSC-22 [Homo sapiens] >emb CAA10951.1  (AJ222700) TSC-22 [Homo sapiens] >gb AA50566.1  TSC-22 protein [Homo sapiens] >pir JC4813 JC4813 TGF beta-stimulated clone-22 protein - human >sp Q15714 TS22_HUMAN PUTATIVE REGULATORY PROTEIN TSC-22 (TGFB STIMULATED)	dbj BAA07598.1	6932	2	334	82	82	HCRNR93	pSport1

2656	HWLQH13R	protein tyrosine phosphatase (EC 3.1.3.48) [Homo sapiens] >pir A36065 A36065 protein-tyrosine-phosphatase (EC 3.1.3.48), receptor type alpha precursor - human Length = 802	gb AAA36528.1	6933	2	487	100	100	HWLQH13	pSport1
2657	H2CBQ60R	ubiquitin conjugating enzyme [Homo sapiens] >emb CAA05359.1 (AJ002385) ubiquitin-conjugating enzyme, UBC9 [Homo sapiens] >emb CAA65287.1  ubiquitin conjugating enzyme [Homo sapiens] >gb AAA86662.1  ubiquitin-conjugating enzyme [Homo sapiens] >gb AAB02181	dbj BAA08091.1	6934	211	495	98	98	H2CBQ60	pBluescript SK-
2658	H2LAW43R	ubiquitin-conjugating enzyme [Mus musculus] >pir T31067 T31067 BIR repeat containing ubiquitin-conjugating enzyme BRUCE - mouse >sp O88738 O88738 UBIQUITIN-CONJUGATING ENZYME. Length = 4845	emb CAA7672.0.1	6935	3	584	88	93	H2LAW43	pBluescript SK-
2659	HWLVJ22R	(AB032025) ubiquitin [Canis familiaris] >dbj BAA89414.1 (AB036698) ubiquitin [Felis catus] >gb AB52914.1  ubiquitin/ribosomal fusion protein [Sus scrofa] >emb CAA40313.1  ubiquitin-52 amino acid fusion protein [Homo sapiens] >emb CAA40312.1  ubiquitin-5	dbj BAA83996.1	6936	2	259	100	100	HWLVJ22	pSport1
2660	HWLRQ77R	UDP-GalNAc:polypeptide N-acetylgalactosaminyl transferase [Homo sapiens] >pir J37405 J37405 polypeptide N-acetylgalactosaminyltransferase (EC 2.4.1.41) - human >sp Q10471 Q10471 POLYPEPTIDE N-ACETYL GALACTOSAMINYLTRANSFERASE (EC 2.4.1.41) (PROTEIN-UDP ACET	emb CAA5938.1.1	6937	3	596	98	99	HWLRQ77	pSport1
2661	H2CAA28R			6938	2	256			H2CAA28	pBluescript SK-
2662	H2CAA36R			6939	2	109			H2CAA36	pBluescript SK-
2663	H2CBF10R			6940	209	352			H2CBF10	pBluescript SK-

2664	H2CBG84R			6941	157	315			H2CBG84	pBluescript SK-
2665	H2CBJ35R			6942	1	366			H2CBJ35	pBluescript SK-
2666	H2CBJ62R			6943	94	252			H2CBJ62	pBluescript SK-
2667	H2CBK71R			6944	275	466			H2CBK71	pBluescript SK-
2668	H2CBN87R			6945	176	310			H2CBN87	pBluescript SK-
2669	H2CBP73R			6946	28	282			H2CBP73	pBluescript SK-
2670	H2CBS94R			6947	2	172			H2CBS94	pBluescript SK-
2671	H2CBV19R			6948	189	413			H2CBV19	pBluescript SK-
2672	H2CBV81R			6949	3	185			H2CBV81	pBluescript SK-
2673	H2CBW73RB	(AF080171) zinc finger protein ZNF232 [Homo sapiens] >sp AAD46135 AAD46135 Zinc finger protein ZNF232. Length = 417	gb AAD46135.1	6950	84	365	100	100	H2CBW73	pBluescript SK-
2674	H2LAD79R			6951	13	231			H2LAD79	pBluescript SK-
2675	H2LAJ28RB			6952	23	370			H2LAJ28	pBluescript SK-
2676	H2LAZ29R			6953	134	409			H2LAZ29	pBluescript SK-
2677	H2LAZ92R			6954	71	355			H2LAZ92	pBluescript SK-
2678	H2LBA33R			6955	108	326			H2LBA33	pBluescript SK-
2679	H2LBB20R	(AB032952) KIAA1126 protein [Homo sapiens] >sp BAA86440 BAA86440 KIAA1126 protein (fragment). Length = 618	dbj BAA86440.1	6956	2	343	100	100	H2LBB20	pBluescript SK-
2680	HAAAJ56R			6957	1	78			HAAAJ56	pSport1

2681	HADTN09R				6958	4	87				HADTN09	pBluescript
2682	HAUBK53R				6959	1	219				HAUBK53	Uni-ZAP XR
2683	HBAHC91R				6960	1	147				HBAHC91	pSport1
2684	HBMCP86R				6961	62	280				HBMCP86	pBluescript
2685	HCEOM04R				6962	142	393				HCEOM04	Uni-ZAP XR
2686	HCFOE14R				6963	111	320				HCFOE14	pSport1
2687	HCHOX67R				6964	66	287				HCHOX67	pSport1
2688	HCQAB27R				6965	127	240				HCQAB27	Lambda ZAP II
2689	HCQAB42R				6966	1	93				HCQAB42	Lambda ZAP II
2690	HCQAB43R				6967	186	422				HCQAB43	Lambda ZAP II
2691	HCQAB44R				6968	130	474				HCQAB44	Lambda ZAP II
2692	HCQAB53R				6969	97	285				HCQAB53	Lambda ZAP II
2693	HCQAC03R				6970	49	345				HCQAC03	Lambda ZAP II
2694	HCQAC24R				6971	228	437				HCQAC24	Lambda ZAP II
2695	HCQAC80R				6972	3	179				HCQAC80	Lambda ZAP II
2696	HCQAD19R				6973	21	197				HCQAD19	Lambda ZAP II
2697	HCQAD25R				6974	1	138				HCQAD25	Lambda ZAP II
2698	HCQAD31R				6975	3	158				HCQAD31	Lambda ZAP II
2699	HCQAD62R				6976	68	319				HCQAD62	Lambda ZAP II
2700	HCQAD71R				6977	291	485				HCQAD71	Lambda ZAP II

2701	HCQAE24R				6978	312	491		HCQAE24	Lambda ZAP II
2702	HCQAE30R				6979	304	498		HCQAE30	Lambda ZAP II
2703	HCQAE32R				6980	234	437		HCQAE32	Lambda ZAP II
2704	HCQAE39R				6981	3	260		HCQAE39	Lambda ZAP II
2705	HCQAF13R				6982	125	373		HCQAF13	Lambda ZAP II
2706	HCQAF78R				6983	17	394		HCQAF78	Lambda ZAP II
2707	HCQAF94R				6984	326	499		HCQAF94	Lambda ZAP II
2708	HCQAG17R				6985	26	178		HCQAG17	Lambda ZAP II
2709	HCQAG32R				6986	243	494		HCQAG32	Lambda ZAP II
2710	HCQAG34R				6987	3	398		HCQAG34	Lambda ZAP II
2711	HCQAG93R				6988	2	193		HCQAG93	Lambda ZAP II
2712	HCQAH27R				6989	11	100		HCQAH27	Lambda ZAP II
2713	HCQAH33R				6990	204	494		HCQAH33	Lambda ZAP II
2714	HCQAH54R				6991	3	131		HCQAH54	Lambda ZAP II
2715	HCQAH63R				6992	324	494		HCQAH63	Lambda ZAP II
2716	HCQAH89R				6993	190	489		HCQAH89	Lambda ZAP II
2717	HCQAI15R				6994	1	207		HCQAI15	Lambda ZAP II
2718	HCQAJ29R				6995	99	287		HCQAJ29	Lambda ZAP II

2719	HCQAJ44R	(AF161451) HSPC333 [Homo sapiens] >sp AAF29011 AAF29011 HSPC333 (fragment). Length = 147	gb AAF29011. 1 AF1614	6996	3	320	55	63	HCQAJ44	Lambda ZAP II
2720	HCQAJ49R			6997	45	263			HCQAJ49	Lambda ZAP II
2721	HCQAK16R	(AF147790) transmembrane mucin 12 [Homo sapiens] >sp AAD55678 AAD55678 Transmembrane mucin 12 (fragment). Length = 585	gb AAD55678. 1 AF1477	6998	1	345	84	86	HCQAK16	Lambda ZAP II
2722	HCQAK17R			6999	2	241			HCQAK17	Lambda ZAP II
2723	HCQAK38R			7000	70	300			HCQAK38	Lambda ZAP II
2724	HCQAL71R			7001	201	299			HCQAL71	Lambda ZAP II
2725	HCQAL81R			7002	139	300			HCQAL81	Lambda ZAP II
2726	HCQAM32R			7003	3	203			HCQAM32	Lambda ZAP II
2727	HCQAM57R			7004	170	334			HCQAM57	Lambda ZAP II
2728	HCQAM70R			7005	175	384			HCQAM70	Lambda ZAP II
2729	HCQAM78R			7006	62	247			HCQAM78	Lambda ZAP II
2730	HCQAN20R			7007	181	306			HCQAN20	Lambda ZAP II
2731	HCQAN43R			7008	134	358			HCQAN43	Lambda ZAP II
2732	HCQAN44R			7009	166	342			HCQAN44	Lambda ZAP II
2733	HCQAN53R			7010	1	258			HCQAN53	Lambda ZAP II
2734	HCQAN74R			7011	1	345			HCQAN74	Lambda ZAP II



2735	HCQAN95R				7012	208	501			HCQAN95	Lambda ZAP II
2736	HCQAQ35R				7013	3	74			HCQAQ35	Lambda ZAP II
2737	HCQAQ94R				7014	2	82			HCQAQ94	Lambda ZAP II
2738	HCQAR19R				7015	1	54			HCQAR19	Lambda ZAP II
2739	HCQAR63R				7016	271	468			HCQAR63	Lambda ZAP II
2740	HCQAR70R				7017	258	395			HCQAR70	Lambda ZAP II
2741	HCQAR86R				7018	307	405			HCQAR86	Lambda ZAP II
2742	HCQAS25R				7019	1	84			HCQAS25	Lambda ZAP II
2743	HCQAS32R				7020	1	93			HCQAS32	Lambda ZAP II
2744	HCQAS58R				7021	1	75			HCQAS58	Lambda ZAP II
2745	HCQAS60R				7022	3	224			HCQAS60	Lambda ZAP II
2746	HCQAS89R				7023	230	361			HCQAS89	Lambda ZAP II
2747	HCQAT10R				7024	1	51			HCQAT10	Lambda ZAP II
2748	HCQAT12R				7025	56	157			HCQAT12	Lambda ZAP II
2749	HCQAT52R				7026	128	280			HCQAT52	Lambda ZAP II
2750	HCQAT57R				7027	97	258			HCQAT57	Lambda ZAP II
2751	HCQAT94R				7028	136	234			HCQAT94	Lambda ZAP II
2752	HCQAV18R				7029	2	235			HCQAV18	Lambda ZAP II

2753	HCQAV23R				7030	55	255			HCQAV23	Lambda ZAP II
2754	HCQAV58R				7031	3	77			HCQAV58	Lambda ZAP II
2755	HCQAV66R				7032	1	96			HCQAV66	Lambda ZAP II
2756	HCQAV73R				7033	2	148			HCQAV73	Lambda ZAP II
2757	HCQAW23R				7034	1	51			HCQAW23	Lambda ZAP II
2758	HCQAW26R				7035	2	70			HCQAW26	Lambda ZAP II
2759	HCQAW40R				7036	3	227			HCQAW40	Lambda ZAP II
2760	HCQAW67R				7037	3	266			HCQAW67	Lambda ZAP II
2761	HCQBA47R				7038	1	144			HCQBA47	Lambda ZAP II
2762	HCQBA89R				7039	85	381			HCQBA89	Lambda ZAP II
2763	HCQBD01R				7040	65	253			HCQBD01	Lambda ZAP II
2764	HCQBE07R				7041	1	51			HCQBE07	Lambda ZAP II
2765	HCQBE13R				7042	2	115			HCQBE13	Lambda ZAP II
2766	HCQBE19R				7043	82	288			HCQBE19	Lambda ZAP II
2767	HCQBE53R				7044	2	166			HCQBE53	Lambda ZAP II
2768	HCQBE55R				7045	266	403			HCQBE55	Lambda ZAP II
2769	HCQBH24R				7046	106	285			HCQBH24	Lambda ZAP II
2770	HCQBH79R				7047	46	261			HCQBH79	Lambda ZAP II

2771	HCQBL10R				7048	192	314		HCQBL10	Lambda ZAP II
2772	HCQBL61R				7049	174	353		HCQBL61	Lambda ZAP II
2773	HCQBM04R				7050	2	121		HCQBM04	Lambda ZAP II
2774	HCQBM11R				7051	108	302		HCQBM11	Lambda ZAP II
2775	HCQBM58R				7052	91	240		HCQBM58	Lambda ZAP II
2776	HCQBN06RA				7053	61	162		HCQBN06	Lambda ZAP II
2777	HCQBN15RA				7054	2	160		HCQBN15	Lambda ZAP II
2778	HCQBN27RA				7055	23	157		HCQBN27	Lambda ZAP II
2779	HCQBN52R				7056	3	62		HCQBN52	Lambda ZAP II
2780	HCQBN57RA				7057	2	310		HCQBN57	Lambda ZAP II
2781	HCQBN65R				7058	1	93		HCQBN65	Lambda ZAP II
2782	HCQBN81RA				7059	2	334		HCQBN81	Lambda ZAP II
2783	HCQCA12R				7060	1	111		HCQCA12	Lambda ZAP II
2784	HCQCA17R				7061	204	437		HCQCA17	Lambda ZAP II
2785	HCQCA21R				7062	1	72		HCQCA21	Lambda ZAP II
2786	HCQCA27R				7063	26	286		HCQCA27	Lambda ZAP II
2787	HCQCB64R				7064	243	494		HCQCB64	Lambda ZAP II
2788	HCQCB78R				7065	2	154		HCQCB78	Lambda ZAP II

2789	HCQCB91R				7066	1	99			HCQCB91	Lambda ZAP II
2790	HCQCC50R				7067	2	115			HCQCC50	Lambda ZAP II
2791	HCQCC51R				7068	2	115			HCQCC51	Lambda ZAP II
2792	HCQCC72R				7069	192	416			HCQCC72	Lambda ZAP II
2793	HCQCC88R				7070	35	196			HCQCC88	Lambda ZAP II
2794	HCQCC93R				7071	139	240			HCQCC93	Lambda ZAP II
2795	HCQCD10R				7072	84	437			HCQCD10	Lambda ZAP II
2796	HCQCD46R				7073	211	384			HCQCD46	Lambda ZAP II
2797	HCQCE19R				7074	43	447			HCQCE19	Lambda ZAP II
2798	HCQCE22R				7075	93	446			HCQCE22	Lambda ZAP II
2799	HCQCE28R				7076	1	123			HCQCE28	Lambda ZAP II
2800	HCQCE32R				7077	1	192			HCQCE32	Lambda ZAP II
2801	HCQCE42R				7078	2	103			HCQCE42	Lambda ZAP II
2802	HCQCE46R				7079	2	199			HCQCE46	Lambda ZAP II
2803	HCQCE59R				7080	1	231			HCQCE59	Lambda ZAP II
2804	HCQCE68R				7081	263	427			HCQCE68	Lambda ZAP II
2805	HCQCE72R				7082	1	453			HCQCE72	Lambda ZAP II
2806	HCQCE79R				7083	2	139			HCQCE79	Lambda ZAP II

2807	HCQCE80R				7084	2	76			HCQCE80	Lambda ZAP II
2808	HCQCE83R				7085	2	139			HCQCE83	Lambda ZAP II
2809	HCQCE92R				7086	1	75			HCQCE92	Lambda ZAP II
2810	HCQCE95R				7087	2	349			HCQCE95	Lambda ZAP II
2811	HCQCE96R				7088	48	437			HCQCE96	Lambda ZAP II
2812	HCQCF26R				7089	3	224			HCQCF26	Lambda ZAP II
2813	HCQCF39R				7090	2	52			HCQCF39	Lambda ZAP II
2814	HCQCF74R				7091	2	97			HCQCF74	Lambda ZAP II
2815	HCQCF77R				7092	261	506			HCQCF77	Lambda ZAP II
2816	HCQCF80R				7093	1	117			HCQCF80	Lambda ZAP II
2817	HCQCF82R				7094	57	269			HCQCF82	Lambda ZAP II
2818	HCQCF88R				7095	1	168			HCQCF88	Lambda ZAP II
2819	HCQCG14R				7096	1	111			HCQCG14	Lambda ZAP II
2820	HCQCG19R				7097	1	123			HCQCG19	Lambda ZAP II
2821	HCQCG42R				7098	1	105			HCQCG42	Lambda ZAP II
2822	HCQCG49R				7099	2	130			HCQCG49	Lambda ZAP II
2823	HCQCG56R				7100	1	99			HCQCG56	Lambda ZAP II
2824	HCQCG74R				7101	1	69			HCQCG74	Lambda ZAP II

2825	HCQCH01R				7102	2	82			HCQCH01	Lambda ZAP II
2826	HCQCH03R				7103	41	295			HCQCH03	Lambda ZAP II
2827	HCQCH16R				7104	26	235			HCQCH16	Lambda ZAP II
2828	HCQCH30R				7105	1	111			HCQCH30	Lambda ZAP II
2829	HCQCH32R				7106	1	282			HCQCH32	Lambda ZAP II
2830	HCQCH33R				7107	2	100			HCQCH33	Lambda ZAP II
2831	HCQCH47R				7108	3	239			HCQCH47	Lambda ZAP II
2832	HCQCH61R				7109	3	83			HCQCH61	Lambda ZAP II
2833	HCQCH69R				7110	1	129			HCQCH69	Lambda ZAP II
2834	HCQCH83R				7111	3	98			HCQCH83	Lambda ZAP II
2835	HCQCI18R				7112	103	309			HCQCI18	Lambda ZAP II
2836	HCQCI28R				7113	1	102			HCQCI28	Lambda ZAP II
2837	HCQCI42R				7114	1	231			HCQCI42	Lambda ZAP II
2838	HCQCI57R				7115	1	96			HCQCI57	Lambda ZAP II
2839	HCQCI63R				7116	76	213			HCQCI63	Lambda ZAP II
2840	HCQCI64R				7117	120	302			HCQCI64	Lambda ZAP II
2841	HCQCI69R				7118	1	96			HCQCI69	Lambda ZAP II
2842	HCQCI75R				7119	1	60			HCQCI75	Lambda ZAP II

2843	HCQC189R				7120	166	360			HCQC189	Lambda ZAP II
2844	HCQC111R				7121	3	176			HCQC111	Lambda ZAP II
2845	HCQC121R				7122	1	111			HCQC121	Lambda ZAP II
2846	HCQC125R				7123	60	173			HCQC125	Lambda ZAP II
2847	HCQC134R				7124	1	99			HCQC134	Lambda ZAP II
2848	HCQC138R				7125	41	313			HCQC138	Lambda ZAP II
2849	HCQC142R				7126	43	234			HCQC142	Lambda ZAP II
2850	HCQC145R				7127	7	75			HCQC145	Lambda ZAP II
2851	HCQC150R				7128	1	99			HCQC150	Lambda ZAP II
2852	HCQC151R				7129	3	116			HCQC151	Lambda ZAP II
2853	HCQC168R				7130	1	99			HCQC168	Lambda ZAP II
2854	HCQC176R				7131	1	48			HCQC176	Lambda ZAP II
2855	HCQC177R				7132	2	130			HCQC177	Lambda ZAP II
2856	HCQC185R				7133	1	129			HCQC185	Lambda ZAP II
2857	HCQC189R				7134	182	415			HCQC189	Lambda ZAP II
2858	HCQC194R				7135	46	207			HCQC194	Lambda ZAP II
2859	HCQCK03R				7136	2	103			HCQCK03	Lambda ZAP II
2860	HCQCK17R				7137	1	246			HCQCK17	Lambda ZAP II

2861	HCQCK25R				7138	1	159			HCQCK25	Lambda ZAP II
2862	HCQCK34R				7139	1	114			HCQCK34	Lambda ZAP II
2863	HCQCK39R				7140	3	140			HCQCK39	Lambda ZAP II
2864	HCQCK50R				7141	2	103			HCQCK50	Lambda ZAP II
2865	HCQCK54R				7142	1	99			HCQCK54	Lambda ZAP II
2866	HCQCK58R				7143	2	121			HCQCK58	Lambda ZAP II
2867	HCQCK59R				7144	119	280			HCQCK59	Lambda ZAP II
2868	HCQCK81R				7145	153	380			HCQCK81	Lambda ZAP II
2869	HCQCK90R				7146	22	201			HCQCK90	Lambda ZAP II
2870	HCQCL01R				7147	143	445			HCQCL01	Lambda ZAP II
2871	HCQCL05R				7148	91	252			HCQCL05	Lambda ZAP II
2872	HCQCL07R				7149	3	68			HCQCL07	Lambda ZAP II
2873	HCQCL11R				7150	1	102			HCQCL11	Lambda ZAP II
2874	HCQCL14R				7151	2	229			HCQCL14	Lambda ZAP II
2875	HCQCL19R				7152	3	104			HCQCL19	Lambda ZAP II
2876	HCQCL20R				7153	8	187			HCQCL20	Lambda ZAP II
2877	HCQCL22R				7154	142	279			HCQCL22	Lambda ZAP II
2878	HCQCL30R				7155	27	101			HCQCL30	Lambda ZAP II



2879	HCQCL35R				7156	1	102		HCQCL35	Lambda ZAP II
2880	HCQCL43R				7157	1	237		HCQCL43	Lambda ZAP II
2881	HCQCL46R				7158	1	69		HCQCL46	Lambda ZAP II
2882	HCQCL48R				7159	57	251		HCQCL48	Lambda ZAP II
2883	HCQCL51R				7160	2	100		HCQCL51	Lambda ZAP II
2884	HCQCL54R				7161	17	133		HCQCL54	Lambda ZAP II
2885	HCQCL55R				7162	2	100		HCQCL55	Lambda ZAP II
2886	HCQCL63R				7163	2	253		HCQCL63	Lambda ZAP II
2887	HCQCL64R				7164	1	144		HCQCL64	Lambda ZAP II
2888	HCQCL65R				7165	2	280		HCQCL65	Lambda ZAP II
2889	HCQCL66R				7166	1	231		HCQCL66	Lambda ZAP II
2890	HCQCL69R				7167	3	155		HCQCL69	Lambda ZAP II
2891	HCQCL73R				7168	110	214		HCQCL73	Lambda ZAP II
2892	HCQCL78R				7169	151	330		HCQCL78	Lambda ZAP II
2893	HCQCL79R				7170	34	177		HCQCL79	Lambda ZAP II
2894	HCQCL90R				7171	3	278		HCQCL90	Lambda ZAP II
2895	HCQCL92R				7172	6	134		HCQCL92	Lambda ZAP II
2896	HCQCM69R				7173	172	387		HCQCM69	Lambda ZAP II

2897	HCQCO30R				7174	2	193				HCQCO30	Lambda ZAP II
2898	HCQCO53R				7175	122	388				HCQCO53	Lambda ZAP II
2899	HCQCO57R				7176	82	273				HCQCO57	Lambda ZAP II
2900	HCQCO66R				7177	1	162				HCQCO66	Lambda ZAP II
2901	HCQCO79R				7178	29	151				HCQCO79	Lambda ZAP II
2902	HCQCO85R				7179	2	139				HCQCO85	Lambda ZAP II
2903	HCQCP08R				7180	3	338				HCQCP08	Lambda ZAP II
2904	HCQCP14R				7181	108	296				HCQCP14	Lambda ZAP II
2905	HCQCP15R				7182	2	55				HCQCP15	Lambda ZAP II
2906	HCQCP19R				7183	15	128				HCQCP19	Lambda ZAP II
2907	HCQCP23R				7184	1	105				HCQCP23	Lambda ZAP II
2908	HCQCP27R				7185	213	365				HCQCP27	Lambda ZAP II
2909	HCQCP30R				7186	102	200				HCQCP30	Lambda ZAP II
2910	HCQCP35R				7187	3	62				HCQCP35	Lambda ZAP II
2911	HCQCP42R				7188	1	48				HCQCP42	Lambda ZAP II
2912	HCQCP58R				7189	1	180				HCQCP58	Lambda ZAP II
2913	HCQCP75R				7190	1	72				HCQCP75	Lambda ZAP II
2914	HCQCP79R				7191	1	108				HCQCP79	Lambda ZAP II

2915	HCQCP86R			7192	1	99			HCQCP86	Lambda ZAP II
2916	HCQCP89R			7193	2	166			HCQCP89	Lambda ZAP II
2917	HCQCQ09R			7194	300	575			HCQCQ09	Lambda ZAP II
2918	HCQCQ17R			7195	22	159			HCQCQ17	Lambda ZAP II
2919	HCQCQ48R			7196	1	111			HCQCQ48	Lambda ZAP II
2920	HCQCR15R			7197	140	436			HCQCR15	Lambda ZAP II
2921	HCQCR44R			7198	173	400			HCQCR44	Lambda ZAP II
2922	HCQCR69R			7199	70	186			HCQCR69	Lambda ZAP II
2923	HCQCT38R			7200	71	184			HCQCT38	Lambda ZAP II
2924	HCQCT49R			7201	3	158			HCQCT49	Lambda ZAP II
2925	HCQCT84R			7202	1	198			HCQCT84	Lambda ZAP II
2926	HCQCT89R			7203	2	367			HCQCT89	Lambda ZAP II
2927	HCQCU08R			7204	3	122			HCQCU08	Lambda ZAP II
2928	HCQCU19R			7205	235	453			HCQCU19	Lambda ZAP II
2929	HCQCU37R			7206	2	97			HCQCU37	Lambda ZAP II
2930	HCQCU55R			7207	265	486			HCQCU55	Lambda ZAP II
2931	HCQCU57R			7208	274	456			HCQCU57	Lambda ZAP II
2932	HCQCU59R			7209	1	51			HCQCU59	Lambda ZAP II

2933	HCQCU67R			7210	1	168				HCQCU67	Lambda ZAP II
2934	HCQCU72R			7211	131	238				HCQCU72	Lambda ZAP II
2935	HCQCU73R			7212	1	99				HCQCU73	Lambda ZAP II
2936	HCQCV01R			7213	371	628				HCQCV01	Lambda ZAP II
2937	HCQCV21R			7214	1	99				HCQCV21	Lambda ZAP II
2938	HCQCV50R			7215	330	584				HCQCV50	Lambda ZAP II
2939	HCQCV68R			7216	425	625				HCQCV68	Lambda ZAP II
2940	HCQCV73R			7217	1	183				HCQCV73	Lambda ZAP II
2941	HCQCV91R			7218	84	227				HCQCV91	Lambda ZAP II
2942	HCQCX11R			7219	177	524				HCQCX11	Lambda ZAP II
2943	HCQCX18R			7220	100	264				HCQCX18	Lambda ZAP II
2944	HCQCX21R			7221	209	562				HCQCX21	Lambda ZAP II
2945	HCQCX22R			7222	2	364				HCQCX22	Lambda ZAP II
2946	HCQCX33R			7223	32	277				HCQCX33	Lambda ZAP II
2947	HCQCX57R			7224	166	399				HCQCX57	Lambda ZAP II
2948	HCQCX90R			7225	213	344				HCQCX90	Lambda ZAP II
2949	HCQDA09R			7226	346	636				HCQDA09	Lambda ZAP II
2950	HCQDA20R			7227	375	704				HCQDA20	Lambda ZAP II

2951	HCQDA28R				7228	68	349			HCQDA28	Lambda ZAP II
2952	HCQDA36R				7229	1	141			HCQDA36	Lambda ZAP II
2953	HCQDA52R				7230	1	102			HCQDA52	Lambda ZAP II
2954	HCQDA55R				7231	176	454			HCQDA55	Lambda ZAP II
2955	HCQDA66R				7232	1	252			HCQDA66	Lambda ZAP II
2956	HCQDA86R				7233	238	333			HCQDA86	Lambda ZAP II
2957	HCQDB17R				7234	2	268			HCQDB17	Lambda ZAP II
2958	HCQDB26R				7235	303	494			HCQDB26	Lambda ZAP II
2959	HCQDB29R				7236	2	148			HCQDB29	Lambda ZAP II
2960	HCQDB41R				7237	61	150			HCQDB41	Lambda ZAP II
2961	HCQDB48R				7238	282	461			HCQDB48	Lambda ZAP II
2962	HCQDB49R				7239	1	120			HCQDB49	Lambda ZAP II
2963	HCQDB52R				7240	2	373			HCQDB52	Lambda ZAP II
2964	HCQDB54R				7241	2	391			HCQDB54	Lambda ZAP II
2965	HCQDB55R				7242	126	293			HCQDB55	Lambda ZAP II
2966	HCQDB78R				7243	1	60			HCQDB78	Lambda ZAP II
2967	HCQDC02R				7244	3	185			HCQDC02	Lambda ZAP II
2968	HCQDC12R				7245	156	329			HCQDC12	Lambda ZAP II

2969	HCQDC13R			7246	45	209			HCQDC13	Lambda ZAP II
2970	HCQDC15R			7247	2	94			HCQDC15	Lambda ZAP II
2971	HCQDC28R			7248	45	155			HCQDC28	Lambda ZAP II
2972	HCQDC29R			7249	132	317			HCQDC29	Lambda ZAP II
2973	HCQDC33R			7250	17	175			HCQDC33	Lambda ZAP II
2974	HCQDC44R			7251	408	542			HCQDC44	Lambda ZAP II
2975	HCQDC63R			7252	273	509			HCQDC63	Lambda ZAP II
2976	HCQDC74R			7253	145	360			HCQDC74	Lambda ZAP II
2977	HCQDC88R			7254	303	515			HCQDC88	Lambda ZAP II
2978	HCQDD35R			7255	90	224			HCQDD35	Lambda ZAP II
2979	HCQDD65R			7256	270	617			HCQDD65	Lambda ZAP II
2980	HCQDD91R			7257	316	465			HCQDD91	Lambda ZAP II
2981	HCQDE04R			7258	24	98			HCQDE04	Lambda ZAP II
2982	HCQDE10R			7259	163	396			HCQDE10	Lambda ZAP II
2983	HCQDE20R			7260	1	99			HCQDE20	Lambda ZAP II
2984	HCQDE25R			7261	255	482			HCQDE25	Lambda ZAP II
2985	HCQDE31R			7262	1	99			HCQDE31	Lambda ZAP II
2986	HCQDE38R			7263	107	322			HCQDE38	Lambda ZAP II

2987	HCQDE45R				7264	185	340			HCQDE45	Lambda ZAP II
2988	HCQDE52R				7265	74	265			HCQDE52	Lambda ZAP II
2989	HCQDE58R				7266	1	114			HCQDE58	Lambda ZAP II
2990	HCQDE59R				7267	17	214			HCQDE59	Lambda ZAP II
2991	HCQDE61R				7268	1	198			HCQDE61	Lambda ZAP II
2992	HCQDE68R				7269	3	146			HCQDE68	Lambda ZAP II
2993	HCQDF22R				7270	2	61			HCQDF22	Lambda ZAP II
2994	HCQDF44R				7271	125	427			HCQDF44	Lambda ZAP II
2995	HCQDF51R				7272	50	127			HCQDF51	Lambda ZAP II
2996	HCQDF66R				7273	1	111			HCQDF66	Lambda ZAP II
2997	HCQDF69R				7274	2	184			HCQDF69	Lambda ZAP II
2998	HCQDF70R				7275	3	116			HCQDF70	Lambda ZAP II
2999	HCQDF79R				7276	1	129			HCQDF79	Lambda ZAP II
3000	HCQDF93R				7277	153	332			HCQDF93	Lambda ZAP II
3001	HCQDG40R				7278	79	279			HCQDG40	Lambda ZAP II
3002	HCQDG62R				7279	1	99			HCQDG62	Lambda ZAP II
3003	HCQDG71R				7280	21	92			HCQDG71	Lambda ZAP II
3004	HCQDG80R				7281	152	271			HCQDG80	Lambda ZAP II

3005	HCQDG86R				7282	1	108				HCQDG86	Lambda ZAP II
3006	HCQDH18R				7283	31	141				HCQDH18	Lambda ZAP II
3007	HCQDH41R				7284	1	57				HCQDH41	Lambda ZAP II
3008	HCQDH42R				7285	83	292				HCQDH42	Lambda ZAP II
3009	HCQDH50R				7286	150	443				HCQDH50	Lambda ZAP II
3010	HCQDH57R				7287	176	346				HCQDH57	Lambda ZAP II
3011	HCQDH60R				7288	2	124				HCQDH60	Lambda ZAP II
3012	HCQDH65R				7289	6	68				HCQDH65	Lambda ZAP II
3013	HCQDH66R				7290	1	147				HCQDH66	Lambda ZAP II
3014	HCQDH68R				7291	1	102				HCQDH68	Lambda ZAP II
3015	HCQDH78R				7292	1	102				HCQDH78	Lambda ZAP II
3016	HCQDH79R				7293	1	102				HCQDH79	Lambda ZAP II
3017	HCQDH95R				7294	2	109				HCQDH95	Lambda ZAP II
3018	HCQDI19R				7295	1	54				HCQDI19	Lambda ZAP II
3019	HCQDI42R				7296	2	229				HCQDI42	Lambda ZAP II
3020	HCQDI63R				7297	1	105				HCQDI63	Lambda ZAP II
3021	HCQDI67R				7298	290	541				HCQDI67	Lambda ZAP II
3022	HCQDI77R				7299	241	444				HCQDI77	Lambda ZAP II



3023	HCQDJ78R			7300	3	140			HCQDJ78	Lambda ZAP II
3024	HCQDI85R			7301	185	427			HCQDI85	Lambda ZAP II
3025	HCQDI95R			7302	117	461			HCQDI95	Lambda ZAP II
3026	HCQDJ13R			7303	1	108			HCQDJ13	Lambda ZAP II
3027	HCQDJ19R			7304	299	544			HCQDJ19	Lambda ZAP II
3028	HCQDJ21R			7305	58	363			HCQDJ21	Lambda ZAP II
3029	HCQDJ22R			7306	1	102			HCQDJ22	Lambda ZAP II
3030	HCQDJ52R			7307	1	102			HCQDJ52	Lambda ZAP II
3031	HCQDJ68R			7308	238	543			HCQDJ68	Lambda ZAP II
3032	HCQDJ70R			7309	1	69			HCQDJ70	Lambda ZAP II
3033	HCQDJ83R			7310	1	111			HCQDJ83	Lambda ZAP II
3034	HCQDJ84R			7311	1	114			HCQDJ84	Lambda ZAP II
3035	HCQDJ91R			7312	3	182			HCQDJ91	Lambda ZAP II
3036	HCQDJ93R			7313	152	445			HCQDJ93	Lambda ZAP II
3037	HCQDJ95R			7314	93	473			HCQDJ95	Lambda ZAP II
3038	HCQDK13R			7315	186	422			HCQDK13	Lambda ZAP II
3039	HCQDK19R			7316	259	393			HCQDK19	Lambda ZAP II
3040	HCQDK20R			7317	1	114			HCQDK20	Lambda ZAP II

3041	HCQDK34R				7318	3	59			HCQDK34	Lambda ZAP II
3042	HCQDK49R				7319	1	105			HCQDK49	Lambda ZAP II
3043	HCQDK50R				7320	1	153			HCQDK50	Lambda ZAP II
3044	HCQDK56R				7321	2	154			HCQDK56	Lambda ZAP II
3045	HCQDK58R				7322	14	127			HCQDK58	Lambda ZAP II
3046	HCQDK75R				7323	1	114			HCQDK75	Lambda ZAP II
3047	HCQDK89R				7324	154	360			HCQDK89	Lambda ZAP II
3048	HCQDL12R				7325	22	246			HCQDL12	Lambda ZAP II
3049	HCQDL24R				7326	3	200			HCQDL24	Lambda ZAP II
3050	HCQDL36R				7327	1	132			HCQDL36	Lambda ZAP II
3051	HCQDL43R				7328	1	114			HCQDL43	Lambda ZAP II
3052	HCQDL52R				7329	1	54			HCQDL52	Lambda ZAP II
3053	HCQDL54R				7330	2	292			HCQDL54	Lambda ZAP II
3054	HCQDL57R				7331	55	174			HCQDL57	Lambda ZAP II
3055	HCQDL93R				7332	1	99			HCQDL93	Lambda ZAP II
3056	HCQDL96R				7333	1	135			HCQDL96	Lambda ZAP II
3057	HCQDM01R				7334	3	107			HCQDM01	Lambda ZAP II
3058	HCQDM17R				7335	3	53			HCQDM17	Lambda ZAP II

3059	HCQDM49R				7336	3	146			HCQDM49	Lambda ZAP II
3060	HCQDM55R				7337	1	66			HCQDM55	Lambda ZAP II
3061	HCQDM58R				7338	1	114			HCQDM58	Lambda ZAP II
3062	HCQDN08R				7339	67	213			HCQDN08	Lambda ZAP II
3063	HCQDN32R				7340	3	56			HCQDN32	Lambda ZAP II
3064	HCQDN33R				7341	252	515			HCQDN33	Lambda ZAP II
3065	HCQDN78R				7342	1	105			HCQDN78	Lambda ZAP II
3066	HCQDO05R				7343	122	286			HCQDO05	Lambda ZAP II
3067	HCQDO07R				7344	40	171			HCQDO07	Lambda ZAP II
3068	HCQDO25R				7345	138	413			HCQDO25	Lambda ZAP II
3069	HCQDO44R				7346	69	296			HCQDO44	Lambda ZAP II
3070	HCQDO60R				7347	2	241			HCQDO60	Lambda ZAP II
3071	HCQDO75R				7348	1	63			HCQDO75	Lambda ZAP II
3072	HCQDO83R				7349	112	300			HCQDO83	Lambda ZAP II
3073	HCQDO88R				7350	82	186			HCQDO88	Lambda ZAP II
3074	HCQDP14R				7351	237	443			HCQDP14	Lambda ZAP II
3075	HCQDP18R				7352	61	240			HCQDP18	Lambda ZAP II
3076	HCQDP41R				7353	1	54			HCQDP41	Lambda ZAP II

3077	HCQDP50R				7354	1	102			HCQDP50	Lambda ZAP II
3078	HCQDP91R				7355	247	390			HCQDP91	Lambda ZAP II
3079	HCQDQ08R				7356	241	360			HCQDQ08	Lambda ZAP II
3080	HCQDQ09R				7357	269	427			HCQDQ09	Lambda ZAP II
3081	HCQDQ45R				7358	1	102			HCQDQ45	Lambda ZAP II
3082	HCQDQ80R				7359	62	283			HCQDQ80	Lambda ZAP II
3083	HCQDR04R				7360	286	516			HCQDR04	Lambda ZAP II
3084	HCQDR49R				7361	1	99			HCQDR49	Lambda ZAP II
3085	HCQDR54R				7362	86	292			HCQDR54	Lambda ZAP II
3086	HCQDR89R				7363	216	446			HCQDR89	Lambda ZAP II
3087	HCQDS01R				7364	1	300			HCQDS01	Lambda ZAP II
3088	HCQDS14R				7365	177	542			HCQDS14	Lambda ZAP II
3089	HCQDS29R				7366	3	152			HCQDS29	Lambda ZAP II
3090	HCQDS34R				7367	1	105			HCQDS34	Lambda ZAP II
3091	HCQDS40R				7368	130	360			HCQDS40	Lambda ZAP II
3092	HCQDS51R				7369	183	416			HCQDS51	Lambda ZAP II
3093	HCQDS53R				7370	348	548			HCQDS53	Lambda ZAP II
3094	HCQDS56R				7371	339	533			HCQDS56	Lambda ZAP II

3095	HCQDS61R				7372	1	300			HCQDS61	Lambda ZAP II
3096	HCQDS62R				7373	3	290			HCQDS62	Lambda ZAP II
3097	HCQDS63R				7374	388	564			HCQDS63	Lambda ZAP II
3098	HCQDS67R				7375	1	114			HCQDS67	Lambda ZAP II
3099	HCQDS83R				7376	432	590			HCQDS83	Lambda ZAP II
3100	HCQDS84R				7377	1	102			HCQDS84	Lambda ZAP II
3101	HCQDS89R				7378	1	78			HCQDS89	Lambda ZAP II
3102	HCQDT17R				7379	398	733			HCQDT17	Lambda ZAP II
3103	HCQDT48RA				7380	113	361			HCQDT48	Lambda ZAP II
3104	HCQDT63R				7381	2	61			HCQDT63	Lambda ZAP II
3105	HCQDT64R				7382	141	347			HCQDT64	Lambda ZAP II
3106	HCQDT93RA				7383	236	418			HCQDT93	Lambda ZAP II
3107	HCQDU24R				7384	31	102			HCQDU24	Lambda ZAP II
3108	HCQDU34R				7385	3	128			HCQDU34	Lambda ZAP II
3109	HCQDU59R				7386	57	194			HCQDU59	Lambda ZAP II
3110	HCQDU60R				7387	1	102			HCQDU60	Lambda ZAP II
3111	HCQDU65R				7388	2	115			HCQDU65	Lambda ZAP II
3112	HCQDU69R				7389	1	156			HCQDU69	Lambda ZAP II

3113	HCQDU94R				7390	2	76			HCQDU94	Lambda ZAP II
3114	HCQDV27R				7391	17	112			HCQDV27	Lambda ZAP II
3115	HCQDV41R				7392	1	528			HCQDV41	Lambda ZAP II
3116	HCQDV44R				7393	2	274			HCQDV44	Lambda ZAP II
3117	HCQDV49R				7394	87	419			HCQDV49	Lambda ZAP II
3118	HCQDV53R				7395	96	260			HCQDV53	Lambda ZAP II
3119	HCQDV62R				7396	43	99			HCQDV62	Lambda ZAP II
3120	HCQDV63R				7397	37	174			HCQDV63	Lambda ZAP II
3121	HCQDV64R				7398	1	102			HCQDV64	Lambda ZAP II
3122	HCQDV74R				7399	1	123			HCQDV74	Lambda ZAP II
3123	HCQDV76R				7400	1	105			HCQDV76	Lambda ZAP II
3124	HCQDV79R				7401	7	72			HCQDV79	Lambda ZAP II
3125	HCQDV83R				7402	26	238			HCQDV83	Lambda ZAP II
3126	HCQDW01R				7403	2	127			HCQDW01	Lambda ZAP II
3127	HCQDW02R				7404	3	98			HCQDW02	Lambda ZAP II
3128	HCQDW15R				7405	2	97			HCQDW15	Lambda ZAP II
3129	HCQDW30R				7406	2	100			HCQDW30	Lambda ZAP II
3130	HCQDW38R				7407	1	156			HCQDW38	Lambda ZAP II

3131	HCQDW69R				7408	22	135			HCQDW69	Lambda ZAP II
3132	HCQDW73R				7409	2	112			HCQDW73	Lambda ZAP II
3133	HCQDW77R				7410	74	409			HCQDW77	Lambda ZAP II
3134	HCQDW85R				7411	1	72			HCQDW85	Lambda ZAP II
3135	HCQDW88R				7412	30	98			HCQDW88	Lambda ZAP II
3136	HCRMA34R				7413	1	93			HCRMA34	pSportI
3137	HCRMA60R				7414	1	135			HCRMA60	pSportI
3138	HCRMA62R				7415	5	61			HCRMA62	pSportI
3139	HCRMA71R				7416	207	377			HCRMA71	pSportI
3140	HCRMB13R				7417	3	128			HCRMB13	pSportI
3141	HCRMB18R				7418	2	142			HCRMB18	pSportI
3142	HCRMB19R				7419	22	153			HCRMB19	pSportI
3143	HCRMB44R				7420	108	374			HCRMB44	pSportI
3144	HCRMB65R				7421	2	79			HCRMB65	pSportI
3145	HCRMB82R				7422	3	245			HCRMB82	pSportI
3146	HCRMB86R				7423	110	460			HCRMB86	pSportI
3147	HCRMC01R				7424	36	200			HCRMC01	pSportI
3148	HCRMC13R				7425	161	322			HCRMC13	pSportI
3149	HCRMC85R				7426	1	99			HCRMC85	pSportI
3150	HCRMD01RA				7427	2	100			HCRMD01	pSportI
3151	HCRMD24R				7428	1	234			HCRMD24	pSportI
3152	HCRMD33R				7429	148	405			HCRMD33	pSportI
3153	HCRMD57R				7430	184	435			HCRMD57	pSportI
3154	HCRMD77R				7431	3	185			HCRMD77	pSportI
3155	HCRME08R				7432	56	214			HCRME08	pSportI
3156	HCRME25R				7433	1	162			HCRME25	pSportI
3157	HCRME49R				7434	41	274			HCRME49	pSportI
3158	HCRMF03R				7435	1	111			HCRMF03	pSportI

3159	HCRMF07R			7436	1	201				HCRMF07	pSport1
3160	HCRMF23R			7437	3	98				HCRMF23	pSport1
3161	HCRMF24R			7438	75	305				HCRMF24	pSport1
3162	HCRMF33R			7439	2	106				HCRMF33	pSport1
3163	HCRMF38R			7440	50	151				HCRMF38	pSport1
3164	HCRMF47R			7441	261	473				HCRMF47	pSport1
3165	HCRMF67R			7442	2	151				HCRMF67	pSport1
3166	HCRMF72R			7443	1	195				HCRMF72	pSport1
3167	HCRMF82R			7444	16	234				HCRMF82	pSport1
3168	HCRMF84R			7445	1	213				HCRMF84	pSport1
3169	HCRMF91R			7446	2	106				HCRMF91	pSport1
3170	HCRMF93R			7447	91	375				HCRMF93	pSport1
3171	HCRMF94R			7448	1	402				HCRMF94	pSport1
3172	HCRMG20R			7449	139	255				HCRMG20	pSport1
3173	HCRMG43R			7450	1	201				HCRMG43	pSport1
3174	HCRMG80R			7451	2	466				HCRMG80	pSport1
3175	HCRMH08R			7452	1	87				HCRMH08	pSport1
3176	HCRMH75R			7453	4	84				HCRMH75	pSport1
3177	HCRMH83R			7454	17	196				HCRMH83	pSport1
3178	HCRMH94R			7455	1	99				HCRMH94	pSport1
3179	HCRMI04R			7456	197	346				HCRMI04	pSport1
3180	HCRMI33R			7457	1	144				HCRMI33	pSport1
3181	HCRMI40R			7458	229	354				HCRMI40	pSport1
3182	HCRMI47R			7459	3	62				HCRMI47	pSport1
3183	HCRMI60R			7460	2	337				HCRMI60	pSport1
3184	HCRMJ03R			7461	1	60				HCRMJ03	pSport1
3185	HCRMJ21R			7462	194	508				HCRMJ21	pSport1
3186	HCRMJ54R			7463	1	90				HCRMJ54	pSport1
3187	HCRMJ80R			7464	2	118				HCRMJ80	pSport1
3188	HCRMJ81R	(AB023584) reduced expression in cancer [Homo sapiens] >sp BAA88923 BAA88923 Rec protein. Length = 367	dbj BAA88923.1	7465	207	473	100	100		HCRMJ81	pSport1
3189	HCRMJ84R			7466	2	58				HCRMJ84	pSport1



3190	HCRMK11R			7467	3	299		HCRMK11	pSportl
3191	HCRMK94R			7468	30	92		HCRMK94	pSportl
3192	HCRMN04R			7469	16	201		HCRMN04	pSportl
3193	HCRMO53R			7470	1	99		HCRMO53	pSportl
3194	HCRMO55R			7471	3	140		HCRMO55	pSportl
3195	HCRMP32RA			7472	160	390		HCRMP32	pSportl
3196	HCRMR07R			7473	2	67		HCRMR07	pSportl
3197	HCRMR28R			7474	2	274		HCRMR28	pSportl
3198	HCRMR50R			7475	1	144		HCRMR50	pSportl
3199	HCRMR51R			7476	2	100		HCRMR51	pSportl
3200	HCRMS48R			7477	159	332		HCRMS48	pSportl
3201	HCRMS54R			7478	1	99		HCRMS54	pSportl
3202	HCRMS55R			7479	13	72		HCRMS55	pSportl
3203	HCRMT03R			7480	2	82		HCRMT03	pSportl
3204	HCRMT32R			7481	1	69		HCRMT32	pSportl
3205	HCRMU10R			7482	237	476		HCRMU10	pSportl
3206	HCRMU21R			7483	217	378		HCRMU21	pSportl
3207	HCRMU34R			7484	130	321		HCRMU34	pSportl
3208	HCRMU36R			7485	9	131		HCRMU36	pSportl
3209	HCRMU63R			7486	2	64		HCRMU63	pSportl
3210	HCRMU67R			7487	1	60		HCRMU67	pSportl
3211	HCRMU76R			7488	41	79		HCRMU76	pSportl
3212	HCRMU78R			7489	1	66		HCRMU78	pSportl
3213	HCRMU85R			7490	3	245		HCRMU85	pSportl
3214	HCRMV06R			7491	2	82		HCRMV06	pSportl
3215	HCRMV52R			7492	19	90		HCRMV52	pSportl
3216	HCRMV67R			7493	2	247		HCRMV67	pSportl
3217	HCRMV78R			7494	12	146		HCRMV78	pSportl
3218	HCRMV95R			7495	1	54		HCRMV95	pSportl
3219	HCRMW15R			7496	2	205		HCRMW15	pSportl
3220	HCRMW62R			7497	2	283		HCRMW62	pSportl
3221	HCRMW90R			7498	2	142		HCRMW90	pSportl
3222	HCRMX02R			7499	1	180		HCRMX02	pSportl

3223	HCRMX11R				7500	374	502		HCRMX11	pSport1
3224	HCRMY28R				7501	1	105		HCRMY28	pSport1
3225	HCRMY29R				7502	2	109		HCRMY29	pSport1
3226	HCRMY39R				7503	2	157		HCRMY39	pSport1
3227	HCRMZ13R				7504	1	69		HCRMZ13	pSport1
3228	HCRMZ36R				7505	104	451		HCRMZ36	pSport1
3229	HCRMZ53R				7506	2	97		HCRMZ53	pSport1
3230	HCRMZ71R	(AL022313) dJ1119A7.5 (novel protein (isoform 2)) [Homo sapiens] >sp CAB62989 CAB62989 DJ1119A7.5 (novel protein (isoform 2)) (fragment). Length = 100	emb CAB62989.1	7507	114	440	85	89	HCRMZ71	pSport1
3231	HCRMZ92R				7508	312	482		HCRMZ92	pSport1
3232	HCRNA39R				7509	3	56		HCRNA39	pSport1
3233	HCRNA44R				7510	40	168		HCRNA44	pSport1
3234	HCRNA64R				7511	13	108		HCRNA64	pSport1
3235	HCRNA88R				7512	1	51		HCRNA88	pSport1
3236	HCRNB36R				7513	1	387		HCRNB36	pSport1
3237	HCRNB47R				7514	2	130		HCRNB47	pSport1
3238	HCRNB56R				7515	2	97		HCRNB56	pSport1
3239	HCRNB61R				7516	3	116		HCRNB61	pSport1
3240	HCRNB69R				7517	1	114		HCRNB69	pSport1
3241	HCRNB77R				7518	10	87		HCRNB77	pSport1
3242	HCRNB85R				7519	1	105		HCRNB85	pSport1
3243	HCRNC23R				7520	130	444		HCRNC23	pSport1
3244	HCRND21R				7521	195	395		HCRND21	pSport1
3245	HCRND28R				7522	1	141		HCRND28	pSport1
3246	HCRND30R				7523	1	105		HCRND30	pSport1
3247	HCRND45R				7524	217	369		HCRND45	pSport1
3248	HCRNE04R				7525	443	682		HCRNE04	pSport1
3249	HCRNE11R				7526	1	207		HCRNE11	pSport1
3250	HCRNE15R				7527	442	696		HCRNE15	pSport1
3251	HCRNE17R				7528	2	130		HCRNE17	pSport1
3252	HCRNE18R				7529	1	132		HCRNE18	pSport1

3253	HCRNE34R			7530	1	54			HCRNE34	pSport1
3254	HCRNE50R			7531	39	146			HCRNE50	pSport1
3255	HCRNE60R			7532	1	279			HCRNE60	pSport1
3256	HCRNF01R			7533	194	349			HCRNF01	pSport1
3257	HCRNF66R			7534	334	453			HCRNF66	pSport1
3258	HCRNF90R			7535	1	108			HCRNF90	pSport1
3259	HCRNG33R			7536	7	168			HCRNG33	pSport1
3260	HCRNG44R			7537	61	195			HCRNG44	pSport1
3261	HCRNH02R			7538	175	402			HCRNH02	pSport1
3262	HCRNH78R			7539	2	103			HCRNH78	pSport1
3263	HCRNI71R			7540	214	483			HCRNI71	pSport1
3264	HCRNI25R	(AF231038) SP555 protein [Drosophila melanogaster] Length = 293	gb A:AF34807.1 AF2310	7541	59	406	40	54	HCRNI25	pSport1
3265	HCRNK13R			7542	3	116			HCRNK13	pSport1
3266	HCRNK40R			7543	195	464			HCRNK40	pSport1
3267	HCRNK94R			7544	200	493			HCRNK94	pSport1
3268	HCRNL17R			7545	6	50			HCRNL17	pSport1
3269	HCRNL38R			7546	2	202			HCRNL38	pSport1
3270	HCRNL52R			7547	100	198			HCRNL52	pSport1
3271	HCRNL55R			7548	1	57			HCRNL55	pSport1
3272	HCRNL60R			7549	3	311			HCRNL60	pSport1
3273	HCRNL69R			7550	2	85			HCRNL69	pSport1
3274	HCRNL86R			7551	1	72			HCRNL86	pSport1
3275	HCRNM46R			7552	3	122			HCRNM46	pSport1
3276	HCRNM50R			7553	45	188			HCRNM50	pSport1
3277	HCRNN08R			7554	1	51			HCRNN08	pSport1
3278	HCRNN11R			7555	1	141			HCRNN11	pSport1
3279	HCRNN79R			7556	1	57			HCRNN79	pSport1
3280	HCRNO40R			7557	1	204			HCRNO40	pSport1
3281	HCRNO41R			7558	295	471			HCRNO41	pSport1
3282	HCRNO49R			7559	274	546			HCRNO49	pSport1
3283	HCRNP05R			7560	1	159			HCRNP05	pSport1
3284	HCRNP07R			7561	64	183			HCRNP07	pSport1

3285	HCRNP22R			7562	2	172			HCRNP22	pSport1
3286	HCRNP34R			7563	1	315			HCRNP34	pSport1
3287	HCRNP45R			7564	2	130			HCRNP45	pSport1
3288	HCRNP65R			7565	390	524			HCRNP65	pSport1
3289	HCRNP76R			7566	1	114			HCRNP76	pSport1
3290	HCRNPQ59R			7567	3	56			HCRNPQ59	pSport1
3291	HCRNR03R			7568	84	353			HCRNR03	pSport1
3292	HCRNR84R			7569	1	198			HCRNR84	pSport1
3293	HCRNU20R			7570	1	225			HCRNU20	pSport1
3294	HCRNV70R			7571	132	338			HCRNV70	pSport1
3295	HCRNV94R			7572	2	298			HCRNV94	pSport1
3296	HCRNW29R			7573	87	263			HCRNW29	pSport1
3297	HCRNW34R			7574	2	91			HCRNW34	pSport1
3298	HCRNW36R			7575	42	182			HCRNW36	pSport1
3299	HCRNW40R			7576	56	304			HCRNW40	pSport1
3300	HCRNX03R			7577	3	134			HCRNX03	pSport1
3301	HCRNX05R			7578	2	103			HCRNX05	pSport1
3302	HCRNY53R			7579	224	409			HCRNY53	pSport1
3303	HCRNY85R			7580	59	217			HCRNY85	pSport1
3304	HCRNZ22R			7581	181	492			HCRNZ22	pSport1
3305	HCRNZ37R			7582	1	186			HCRNZ37	pSport1
3306	HCRNB24R			7583	1	240			HCRNB24	pSport1
3307	HCRNB35R			7584	1	261			HCRNB35	pSport1
3308	HCRNB68R			7585	119	358			HCRNB68	pSport1
3309	HCRNB83R			7586	1	69			HCRNB83	pSport1
3310	HCRNB85R			7587	193	504			HCRNB85	pSport1
3311	HCRNB36R			7588	23	217			HCRNB36	pSport1
3312	HCRNE09R			7589	14	172			HCRNE09	pSport1
3313	HCRNE19R			7590	30	218			HCRNE19	pSport1
3314	HCRNE67R	(AB028984) KIAA1061 protein [Homo sapiens] >sp BA A83013 BA A83013 KIAA1061 protein (fragment). Length = 693	dbj BA A83013 .1	7591	1	522	79	80	HCRNE67	pSport1
3315	HCRNE81R			7592	1	66			HCRNE81	pSport1

3316	HCROE89R			7593	227	406		HCROE89	pSportl
3317	HCROF29R			7594	12	62		HCROF29	pSportl
3318	HCROF67R			7595	149	463		HCROF67	pSportl
3319	HCROF73R			7596	1	105		HCROF73	pSportl
3320	HCROG40R			7597	43	132		HCROG40	pSportl
3321	HCROG51R			7598	2	394		HCROG51	pSportl
3322	HCROG58R			7599	334	561		HCROG58	pSportl
3323	HCROG62R			7600	116	301		HCROG62	pSportl
3324	HCROG80R			7601	112	408		HCROG80	pSportl
3325	HCROH29R			7602	164	505		HCROH29	pSportl
3326	HCROH55R			7603	1	117		HCROH55	pSportl
3327	HCROH61R			7604	2	88		HCROH61	pSportl
3328	HCROH86R			7605	1	66		HCROH86	pSportl
3329	HCROI10R			7606	75	266		HCROI10	pSportl
3330	HCROI79R			7607	1	168		HCROI79	pSportl
3331	HCROI81R			7608	3	278		HCROI81	pSportl
3332	HCROI83R			7609	203	376		HCROI83	pSportl
3333	HCROI21R			7610	15	59		HCROI21	pSportl
3334	HCROI35R			7611	216	452		HCROI35	pSportl
3335	HCROI40R			7612	72	155		HCROI40	pSportl
3336	HCROI88R			7613	1	246		HCROI88	pSportl
3337	HCROK12R			7614	3	62		HCROK12	pSportl
3338	HCROK28R			7615	29	250		HCROK28	pSportl
3339	HCROK29R			7616	103	267		HCROK29	pSportl
3340	HCROK32R			7617	2	157		HCROK32	pSportl
3341	HCROK33R			7618	1	150		HCROK33	pSportl
3342	HCROK42R			7619	2	151		HCROK42	pSportl
3343	HCROK47R			7620	45	215		HCROK47	pSportl
3344	HCROK70R			7621	3	131		HCROK70	pSportl
3345	HCROK84R			7622	1	102		HCROK84	pSportl
3346	HCROK95R			7623	2	115		HCROK95	pSportl
3347	HCROL14R			7624	113	244		HCROL14	pSportl
3348	HCROL47R			7625	1	99		HCROL47	pSportl

3349	HCROL55R				7626	2	70			HCROL55	pSportl
3350	HCROL69R				7627	76	372			HCROL69	pSportl
3351	HCROM07R				7628	1	216			HCROM07	pSportl
3352	HCROM39R				7629	3	59			HCROM39	pSportl
3353	HCROM50R				7630	1	39			HCROM50	pSportl
3354	HCROM53R				7631	2	226			HCROM53	pSportl
3355	HCROM56R				7632	90	311			HCROM56	pSportl
3356	HCROM63R				7633	44	256			HCROM63	pSportl
3357	HCROM80R				7634	24	218			HCROM80	pSportl
3358	HCROM82R				7635	2	100			HCROM82	pSportl
3359	HCROM01R				7636	2	88			HCROM01	pSportl
3360	HCROM04R				7637	3	260			HCROM04	pSportl
3361	HCROM39R				7638	1	108			HCROM39	pSportl
3362	HCROM42R				7639	1	147			HCROM42	pSportl
3363	HCROM65R				7640	2	64			HCROM65	pSportl
3364	HCROM70R				7641	2	88			HCROM70	pSportl
3365	HCROO20R				7642	60	221			HCROO20	pSportl
3366	HCROO46R				7643	199	447			HCROO46	pSportl
3367	HCROP24R				7644	1	51			HCROP24	pSportl
3368	HCROP51R				7645	26	58			HCROP51	pSportl
3369	HCROP55R				7646	1	99			HCROP55	pSportl
3370	HCROP63R				7647	2	82			HCROP63	pSportl
3371	HCROP69R				7648	1	90			HCROP69	pSportl
3372	HCROP88R				7649	11	64			HCROP88	pSportl
3373	HCROQ04R				7650	2	85			HCROQ04	pSportl
3374	HCROQ13R				7651	3	122			HCROQ13	pSportl
3375	HCROQ79R				7652	2	100			HCROQ79	pSportl
3376	HCROQ92R				7653	164	325			HCROQ92	pSportl
3377	HCROQ38R				7654	1	66			HCROQ38	pSportl
3378	HCROQ69R				7655	1	282			HCROQ69	pSportl
3379	HCROQ76R				7656	18	89			HCROQ76	pSportl
3380	HCROQ80R				7657	1	60			HCROQ80	pSportl
3381	HCROQ08R				7658	69	200			HCROQ08	pSportl

3382	HCROS22R			7659	14	64		HCROS22	pSportl
3383	HCROS52R			7660	2	109		HCROS52	pSportl
3384	HCROT14R			7661	1	99		HCROT14	pSportl
3385	HCROT15R			7662	60	218		HCROT15	pSportl
3386	HCROT19R			7663	60	227		HCROT19	pSportl
3387	HCROT23R			7664	90	245		HCROT23	pSportl
3388	HCROT75R			7665	1	75		HCROT75	pSportl
3389	HCROT84R			7666	3	236		HCROT84	pSportl
3390	HCROT94R			7667	7	63		HCROT94	pSportl
3391	HCROV04R			7668	125	433		HCROV04	pSportl
3392	HCROV08R			7669	32	229		HCROV08	pSportl
3393	HCROV64R			7670	1	375		HCROV64	pSportl
3394	HCROV82R			7671	1	42		HCROV82	pSportl
3395	HCROW39R			7672	1	63		HCROW39	pSportl
3396	HCROW68R			7673	1	66		HCROW68	pSportl
3397	HCROW69R			7674	138	392		HCROW69	pSportl
3398	HCROX16R			7675	1	105		HCROX16	pSportl
3399	HCROX18R			7676	1	75		HCROX18	pSportl
3400	HCROX32R			7677	1	108		HCROX32	pSportl
3401	HCROX38R			7678	1	105		HCROX38	pSportl
3402	HCROX52R			7679	2	100		HCROX52	pSportl
3403	HCROX92R			7680	1	111		HCROX92	pSportl
3404	HCROZ19R			7681	184	363		HCROZ19	pSportl
3405	HCROZ34R			7682	2	232		HCROZ34	pSportl
3406	HCROZ45R			7683	3	413		HCROZ45	pSportl
3407	HCROZ68R			7684	1	129		HCROZ68	pSportl
3408	HCROZ73R			7685	1	90		HCROZ73	pSportl
3409	HCROZ75R			7686	1	102		HCROZ75	pSportl
3410	HCROZ76R			7687	224	397		HCROZ76	pSportl
3411	HCROZ76R			7688	233	463		HCROZ76	pSportl
3412	HCROZ76R			7689	1	318		HCROZ76	pSportl
3413	HCROZ76R			7690	38	187		HCROZ76	pSportl
3414	HCROZ76R			7691	3	59		HCROZ76	pSportl

3415	HCRPA91R				7692	2	79			HCRPA91	pSportl
3416	HCRPB73R				7693	15	59			HCRPB73	pSportl
3417	HCRPC14R				7694	1	63			HCRPC14	pSportl
3418	HCRPC30R				7695	3	125			HCRPC30	pSportl
3419	HCRPC42R				7696	15	113			HCRPC42	pSportl
3420	HCRPC55R				7697	51	338			HCRPC55	pSportl
3421	HCRPC56R				7698	161	340			HCRPC56	pSportl
3422	HCRPC58R				7699	2	121			HCRPC58	pSportl
3423	HCRPC65R				7700	279	458			HCRPC65	pSportl
3424	HCRPC80R				7701	1	99			HCRPC80	pSportl
3425	HCRPC90R				7702	83	247			HCRPC90	pSportl
3426	HCRPD57R				7703	2	82			HCRPD57	pSportl
3427	HCRPD85R				7704	1	162			HCRPD85	pSportl
3428	HCRPE32R				7705	1	174			HCRPE32	pSportl
3429	HCRPE74R				7706	25	276			HCRPE74	pSportl
3430	HCRPF41R				7707	1	51			HCRPF41	pSportl
3431	HCRPF62R				7708	42	209			HCRPF62	pSportl
3432	HCRPF90R				7709	223	423			HCRPF90	pSportl
3433	HCRPF92R				7710	246	392			HCRPF92	pSportl
3434	HCRPG02R				7711	3	116			HCRPG02	pSportl
3435	HCRPG03R				7712	3	152			HCRPG03	pSportl
3436	HCRPG11R				7713	1	69			HCRPG11	pSportl
3437	HCRPG16R				7714	2	211			HCRPG16	pSportl
3438	HCRPG28R				7715	95	229			HCRPG28	pSportl
3439	HCRPG37R				7716	1	402			HCRPG37	pSportl
3440	HCRPG49R				7717	42	164			HCRPG49	pSportl
3441	HCRPG93R				7718	2	85			HCRPG93	pSportl
3442	HCRPH31R				7719	15	173			HCRPH31	pSportl
3443	HCRPH50RA				7720	7	117			HCRPH50	pSportl
3444	HCRPH58RA				7721	76	315			HCRPH58	pSportl
3445	HCRPH93R				7722	2	79			HCRPH93	pSportl
3446	HCRPI35RA				7723	2	217			HCRPI35	pSportl
3447	HCRPI58RA				7724	1	102			HCRPI58	pSportl



3448	HCRP160RA			7725	54	221		HCRP160	pSportl
3449	HCRP194RA			7726	7	90		HCRP194	pSportl
3450	HCRP168RA			7727	1	126		HCRP168	pSportl
3451	HCRPK17R			7728	202	354		HCRPK17	pSportl
3452	HCRPK70R			7729	2	157		HCRPK70	pSportl
3453	HCRPL10R			7730	2	76		HCRPL10	pSportl
3454	HCRPL29R			7731	2	91		HCRPL29	pSportl
3455	HCRPL35R			7732	56	145		HCRPL35	pSportl
3456	HCRPL63R			7733	82	282		HCRPL63	pSportl
3457	HCRPL79R			7734	3	56		HCRPL79	pSportl
3458	HCRPL80R			7735	59	235		HCRPL80	pSportl
3459	HCRPL85R			7736	3	83		HCRPL85	pSportl
3460	HCRPM51R			7737	26	460		HCRPM51	pSportl
3461	HCRPM52R			7738	2	67		HCRPM52	pSportl
3462	HCRPM85R			7739	1	63		HCRPM85	pSportl
3463	HCRPN29R			7740	2	61		HCRPN29	pSportl
3464	HCRPN38R			7741	2	295		HCRPN38	pSportl
3465	HCRPN49R			7742	1	249		HCRPN49	pSportl
3466	HCRPN73R			7743	3	71		HCRPN73	pSportl
3467	HCRPN86R			7744	3	143		HCRPN86	pSportl
3468	HCRPN88R			7745	3	50		HCRPN88	pSportl
3469	HCRPO31R			7746	60	350		HCRPO31	pSportl
3470	HCRPO32R			7747	2	58		HCRPO32	pSportl
3471	HCRPO69R			7748	3	146		HCRPO69	pSportl
3472	HCRPP07R			7749	9	185		HCRPP07	pSportl
3473	HCRPP20R			7750	3	59		HCRPP20	pSportl
3474	HCRPP73R			7751	1	54		HCRPP73	pSportl
3475	HCRPQ23R			7752	2	91		HCRPQ23	pSportl
3476	HCRPQ52R			7753	1	63		HCRPQ52	pSportl
3477	HCRPQ72R	(AB033071) KIAA1245 protein [Homo sapiens] >sp BAA86559 BAA86559 KIAA1245 protein (fragment). Length = 892	dbj BAA86559 .1	7754	99	305	88 90	HCRPQ72	pSportl
3478	HCRPQ79R			7755	7	57		HCRPQ79	pSportl

3479	HCRPR23R					7756	3	107			HCRPR23	pSportl
3480	HCRPR62R					7757	2	196			HCRPR62	pSportl
3481	HCRPR70R					7758	18	161			HCRPR70	pSportl
3482	HCRPR91R					7759	17	160			HCRPR91	pSportl
3483	HCRPR95R					7760	1	66			HCRPR95	pSportl
3484	HCRPS10R					7761	62	136			HCRPS10	pSportl
3485	HCRPS24R					7762	2	67			HCRPS24	pSportl
3486	HCRPS50R					7763	67	228			HCRPS50	pSportl
3487	HCRPT04R					7764	1	144			HCRPT04	pSportl
3488	HCRPT34R					7765	279	383			HCRPT34	pSportl
3489	HCRPT78R					7766	2	133			HCRPT78	pSportl
3490	HCRPT82R					7767	191	352			HCRPT82	pSportl
3491	HCRPT85R					7768	1	57			HCRPT85	pSportl
3492	HCRPU09R					7769	65	271			HCRPU09	pSportl
3493	HCRPU76R					7770	202	312			HCRPU76	pSportl
3494	HCRPV27R					7771	3	74			HCRPV27	pSportl
3495	HCRPV39R					7772	1	174			HCRPV39	pSportl
3496	HCRPV62R					7773	340	534			HCRPV62	pSportl
3497	HCRPV86R					7774	2	172			HCRPV86	pSportl
3498	HCRPV91R	(AK000857) unnamed protein product [Homo sapiens] Length = 180	dbjBAA91400	.11		7775	2	406	100	100	HCRPV91	pSportl
3499	HCRPW68R					7776	3	86			HCRPW68	pSportl
3500	HCRPW72R					7777	2	52			HCRPW72	pSportl
3501	HCRPX21R					7778	23	103			HCRPX21	pSportl
3502	HCRPX71R					7779	3	161			HCRPX71	pSportl
3503	HCRPY01R					7780	223	429			HCRPY01	pSportl
3504	HCRPY59R					7781	2	58			HCRPY59	pSportl
3505	HCRPY91R					7782	6	218			HCRPY91	pSportl
3506	HCRPZ13R					7783	2	163			HCRPZ13	pSportl
3507	HCRPZ39R					7784	1	96			HCRPZ39	pSportl
3508	HCRQB75R					7785	33	257			HCRQB75	pSportl
3509	HCRQC36R					7786	28	294			HCRQC36	pSportl
3510	HCRQC38R					7787	271	519			HCRQC38	pSportl

3511	HCRQD29R				7788	118	303				HCRQD29	pSport1
3512	HCRQD41R				7789	1	102				HCRQD41	pSport1
3513	HCRQD47R				7790	2	418				HCRQD47	pSport1
3514	HCRQD62R				7791	3	122				HCRQD62	pSport1
3515	HCRQD75R				7792	1	66				HCRQD75	pSport1
3516	HCRQF95R				7793	1	207				HCRQF95	pSport1
3517	HCRQG25R	unnamed protein product [unidentified] Length = 180 emb CAB6919 5.11			7794	213	395	71	81		HCRQG25	pSport1
3518	HCRQG72R				7795	44	229				HCRQG72	pSport1
3519	HCRQI03R				7796	3	164				HCRQI03	pSport1
3520	HCRQI32R				7797	1	153				HCRQI32	pSport1
3521	HCRQI34R				7798	310	573				HCRQI34	pSport1
3522	HCRQI65R				7799	1	54				HCRQI65	pSport1
3523	HCRQI91R				7800	425	583				HCRQI91	pSport1
3524	HCRQI04R				7801	10	54				HCRQI04	pSport1
3525	HCRQJ08R				7802	1	90				HCRQJ08	pSport1
3526	HCRQJ19R				7803	3	137				HCRQJ19	pSport1
3527	HCRQJ26R				7804	2	91				HCRQJ26	pSport1
3528	HCRQJ54R				7805	1	48				HCRQJ54	pSport1
3529	HCRQJ70R				7806	123	374				HCRQJ70	pSport1
3530	HCRQK15R				7807	1	54				HCRQK15	pSport1
3531	HCRQL13R				7808	307	462				HCRQL13	pSport1
3532	HCRQL65R				7809	267	458				HCRQL65	pSport1
3533	HCRQM37R				7810	1	498				HCRQM37	pSport1
3534	HCRQM45R				7811	37	162				HCRQM45	pSport1
3535	HCRQM58R				7812	2	118				HCRQM58	pSport1
3536	HCRQM59R				7813	173	403				HCRQM59	pSport1
3537	HCRQM68R				7814	120	293				HCRQM68	pSport1
3538	HCRQN36R				7815	210	323				HCRQN36	pSport1
3539	HCRQN42R				7816	3	134				HCRQN42	pSport1
3540	HCUDT18R				7817	2	235				HCUDT18	ZAP Express

3541	HCYBA36R			7818	1	189				HCYBA36	pBluescript SK-
3542	HCYBC11R			7819	46	123				HCYBC11	pBluescript SK-
3543	HCYBD19R			7820	54	245				HCYBD19	pBluescript SK-
3544	HCYBE06R			7821	75	227				HCYBE06	pBluescript SK-
3545	HCYBE34R	(AF146568) MIL I protein [Homo sapiens] >sp AAAF03602 AAAF03602 MIL I protein. Length = 386	gb AAAF03602.1	7822	2	370	98	98		HCYBE34	pBluescript SK-
3546	HCYBF65R			7823	3	245				HCYBF65	pBluescript SK-
3547	HCYBH59R			7824	145	240				HCYBH59	pBluescript SK-
3548	HCYBH81R			7825	288	437				HCYBH81	pBluescript SK-
3549	HCYBH89R			7826	357	530				HCYBH89	pBluescript SK-
3550	HCYBH93R			7827	275	469				HCYBH93	pBluescript SK-
3551	HCYBK65R			7828	62	232				HCYBK65	pBluescript SK-
3552	HDLAX76R			7829	91	264				HDLAX76	pCMVSPORT 2.0
3553	HDPPE11R	(AF184617) proprotein convertase aPC6C isoform [Branchiostoma californiense] >sp AAAF26302 AAAF26302 Proprotein convertase aPC6C isoform. Length = 1323	gb AAAF26302.1 AF1846	7830	2	355	86	88		HDPPE11	pCMVSPORT 3.0
3554	HDPPE11R			7831	1	57				HDPPE11	pCMVSPORT 3.0
3555	HDQDZ61R			7832	2	154				HDQDZ61	pCMVSPORT 3.0
3556	HDQFV12R			7833	294	482				HDQFV12	pCMVSPORT 3.0

3557	HDQGH10R				7834	1	60			HDQGH10	pCMVSPORT 3.0
3558	HDTDS96R				7835	240	431			HDTDS96	pCMVSPORT 2.0
3559	HDTMG03R				7836	263	409			HDTMG03	pCMVSPORT 2.0
3560	HE2JZ65R				7837	245	409			HE2JZ65	Uni-ZAP XR
3561	HE2RS12R				7838	3	101			HE2RS12	Uni-ZAP XR
3562	HE2TA21R				7839	51	305			HE2TA21	Uni-ZAP XR
3563	HE8AE77R				7840	202	309			HE8AE77	Uni-ZAP XR
3564	HEOAB66RA				7841	3	158			HEOAB66	pBluescript
3565	HEONL43R				7842	2	76			HEONL43	pSportI
3566	HEOSS64R				7843	283	399			HEOSS64	pSportI
3567	HFIXZ28R				7844	72	317			HFIXZ28	pSportI
3568	HFKHA60R				7845	3	440			HFKHA60	Uni-ZAP XR
3569	HFPJM42R				7846	2	67			HFPJM42	Uni-ZAP XR
3570	HFRBW76R				7847	170	325			HFRBW76	Uni-ZAP XR
3571	HFVIF71R				7848	59	232			HFVIF71	pBluescript
3572	HGBBA17R				7849	96	308			HGBBA17	Uni-ZAP XR
3573	HGLAW93R				7850	28	150			HGLAW93	Uni-ZAP XR
3574	HHEAA94R				7851	4	141			HHEAA94	pCMVSPORT 3.0
3575	HHEBR58R				7852	2	133			HHEBR58	pCMVSPORT 3.0
3576	HHEQA63R				7853	260	544			HHEQA63	pCMVSPORT 3.0

3577	HHEWA82R				7854	43	183			HHEWA82	pCMV Sport 3.0
3578	HHFMJ42R				7855	1	87			HHFMJ42	Uni-ZAP XR
3579	HHMMA39R				7856	1	270			HHMMA39	pSportI
3580	HHMMA54R				7857	1	123			HHMMA54	pSportI
3581	HHMMA69R				7858	1	96			HHMMA69	pSportI
3582	HHMMB02R				7859	3	344			HHMMB02	pSportI
3583	HHMMB03R				7860	2	166			HHMMB03	pSportI
3584	HHMMB13R				7861	30	221			HHMMB13	pSportI
3585	HHMMC03R				7862	1	63			HHMMC03	pSportI
3586	HHMMC40R				7863	5	157			HHMMC40	pSportI
3587	HHMMC69R				7864	297	470			HHMMC69	pSportI
3588	HHMMD04R				7865	1	84			HHMMD04	pSportI
3589	HHMMD09R				7866	1	177			HHMMD09	pSportI
3590	HHMMD42R				7867	1	99			HHMMD42	pSportI
3591	HHMMD57R				7868	1	51			HHMMD57	pSportI
3592	HHMME06R				7869	1	99			HHMME06	pSportI
3593	HHMME20R				7870	3	290			HHMME20	pSportI
3594	HHMME64R				7871	2	109			HHMME64	pSportI
3595	HHMMF06R				7872	2	61			HHMMF06	pSportI
3596	HHMMF15R				7873	2	97			HHMMF15	pSportI
3597	HHMMF16R				7874	1	108			HHMMF16	pSportI
3598	HHMMF32R				7875	1	99			HHMMF32	pSportI
3599	HHMMF43R				7876	1	63			HHMMF43	pSportI
3600	HHMMF48R				7877	7	252			HHMMF48	pSportI
3601	HHMMF55R				7878	1	102			HHMMF55	pSportI
3602	HHMMF62R				7879	2	229			HHMMF62	pSportI
3603	HISDB01RA				7880	3	314			IIISDB01	pSportI
3604	HJMBH59R				7881	288	446			HJMBH59	pCMV Sport 3.0
3605	HKABL65R				7882	1	186			HKABL65	pCMV Sport 2.0

3606	HKCAA84R				7883	80	253		HKCAA84	Uni-ZAP XR
3607	HKCSA76R				7884	60	287		HKCSA76	pBluescript
3608	HKCSB18R				7885	282	476		HKCSB18	pBluescript
3609	HKCSB45R				7886	1	240		HKCSB45	pBluescript
3610	HKCSB47R				7887	2	289		HKCSB47	pBluescript
3611	HKCSC92R				7888	11	223		HKCSC92	pBluescript
3612	HKCSF11R				7889	25	357		HKCSF11	pBluescript
3613	HKCSH46R				7890	2	478		HKCSH46	pBluescript
3614	HKCSI81R				7891	3	86		HKCSI81	pBluescript
3615	HKCSJ63R				7892	57	479		HKCSJ63	pBluescript
3616	HKCSL33R				7893	103	225		HKCSL33	pBluescript
3617	HKCSO21R				7894	1	390		HKCSO21	pBluescript
3618	HKCSP88R				7895	191	487		HKCSP88	pBluescript
3619	HKCSP90R				7896	170	358		HKCSP90	pBluescript
3620	HKCTB29R				7897	151	336		HKCTB29	pBluescript
3621	HKCTB80R				7898	47	271		HKCTB80	pBluescript
3622	HKCTD01R				7899	55	354		HKCTD01	pBluescript
3623	HKCTD27R				7900	81	500		HKCTD27	pBluescript
3624	HKLAA31R				7901	159	413		HKLAA31	Lambda ZAP II
3625	HKLAB37R				7902	302	439		HKLAB37	Lambda ZAP II
3626	HKLAB56R				7903	245	487		HKLAB56	Lambda ZAP II
3627	HKLRA55R				7904	214	492		HKLRA55	pBluescript
3628	HKLRA63R				7905	72	344		HKLRA63	pBluescript
3629	HKLRB06R				7906	207	497		HKLRB06	pBluescript
3630	HKLRB21R				7907	64	246		HKLRB21	pBluescript
3631	HKLRB75R				7908	2	58		HKLRB75	pBluescript
3632	HKLSA15R				7909	24	239		HKLSA15	pBluescript
3633	HKLSA23R				7910	3	212		HKLSA23	pBluescript
3634	HKLSA28R				7911	305	427		HKLSA28	pBluescript

3635	HKLSB04R				7912	20	262		HKLSB04	pBluescript
3636	HKLSB05R				7913	1	378		HKLSB05	pBluescript
3637	HKLSB41R				7914	110	388		HKLSB41	pBluescript
3638	HKLSB76R				7915	3	227		HKLSB76	pBluescript
3639	HKLSB93R				7916	177	503		HKLSB93	pBluescript
3640	HKLSC29R				7917	77	337		HKLSC29	pBluescript
3641	HKLSC42R				7918	218	334		HKLSC42	pBluescript
3642	HKLSD10R				7919	96	245		HKLSD10	pBluescript
3643	HKLSD26R				7920	215	400		HKLSD26	pBluescript
3644	HKLSD61R				7921	111	323		HKLSD61	pBluescript
3645	HKLSD79R				7922	169	318		HKLSD79	pBluescript
3646	HKLSD93R				7923	89	298		HKLSD93	pBluescript
3647	HLDCH57R				7924	2	436		HLDCH57	pCMVSPORT 3.0
3648	HLQFP01R				7925	18	104		HLQFP01	Lambda ZAP II
3649	HLBW70R				7926	249	413		HLBW70	pSportI
3650	HMWDE95R				7927	2	316		HMWDE95	Uni-ZAP XR
3651	HNBTH48R				7928	41	190		HNBTH48	pSportI
3652	HNBTM76R				7929	122	259		HNBTM76	pSportI
3653	HNOAT40R				7930	96	317		HNOAT40	pSportI
3654	HNTCO26R				7931	46	453		HNTCO26	pCMVSPORT 3.0
3655	HNTDI71R				7932	44	493		HNTDI71	pCMVSPORT 3.0
3656	HOCTA23R				7933	37	387		HOCTA23	pSportI
3657	HOCTA91R				7934	1	339		HOCTA91	pSportI
3658	HOCTB04R				7935	45	194		HOCTB04	pSportI
3659	HOCTB19R				7936	70	216		HOCTB19	pSportI
3660	HOCTB32R				7937	130	318		HOCTB32	pSportI
3661	HOCTB56R				7938	1	459		HOCTB56	pSportI
3662	HOCTB95R				7939	1	63		HOCTB95	pSportI



3663	HOCTC25R					7940	2	100				HOCTC25	pSport1
3664	HOCTC38R					7941	2	361				HOCTC38	pSport1
3665	HOCTC55R					7942	2	385				HOCTC55	pSport1
3666	HOCTC61R					7943	1	138				HOCTC61	pSport1
3667	HOCTC73R					7944	190	366				HOCTC73	pSport1
3668	HOCTD31R					7945	1	102				HOCTD31	pSport1
3669	HOCTD35R					7946	172	264				HOCTD35	pSport1
3670	HOCTD64R					7947	3	83				HOCTD64	pSport1
3671	HOCTD88R					7948	2	73				HOCTD88	pSport1
3672	HOCTD95R					7949	1	102				HOCTD95	pSport1
3673	HOCTE12R					7950	242	397				HOCTE12	pSport1
3674	HOCTE91R					7951	1	51				HOCTE91	pSport1
3675	HOCTF24R					7952	2	61				HOCTF24	pSport1
3676	HOCTF43R					7953	21	278				HOCTF43	pSport1
3677	HOCTF84R					7954	1	213				HOCTF84	pSport1
3678	HODFV69R					7955	64	210				HODFV69	Uni-ZAP XR
3679	HOEKT71R					7956	47	184				HOEKT71	Uni-ZAP XR
3680	HOEKT65R					7957	3	95				HOEKT65	Uni-ZAP XR
3681	HOGEE21R					7958	3	383				HOGEE21	pCMVSPORT 2.0
3682	HOHAS78R					7959	83	481				HOHAS78	pCMVSPORT 2.0
3683	HOHEE72R					7960	136	309				HOHEE72	pCMVSPORT 2.0
3684	HOSNW54R	(AL137661) hypothetical protein [Homo sapiens] >emb CAB70863.1 (AL137661) hypothetical protein [Homo sapiens] >sp CAB70863 CAB70863 Hypothetical 73.8 kd protein. Length = 661	emb CAB70863.1			7961	20	439	70	70		HOSNW54	Uni-ZAP XR
3685	HOVDH84R					7962	1	165				HOVDH84	pSport1

3686	HPCRD42R	(AF151075) HSPC241 [Homo sapiens] Length = 128	gb AAF36161.1 AF1510	7963	139	456	82	83	HPCRD42	Other
3687	HPDOA19R			7964	70	306			HPDOA19	pSport1
3688	HPFCN76R			7965	90	467			HPFCN76	Uni-ZAP XR
3689	HPJBZ88R	(AL122042) hypothetical protein [Homo sapiens] >pir T34520 T34520 hypothetical protein DKFZp564J157.1 - human (fragment) >sp CAB59179 CAB59179 Hypothetical 17.9 kd protein (fragment). >emb CAB59179.2 (AL122042) hypothetical protein [Homo sapiens] {SUB 22	emb CAB59179.1	7966	30	383	94	94	HPJBZ88	Uni-ZAP XR
3690	HRACX76R			7967	2	136			HRACX76	pCMV Sport 3.0
3691	HSIFC66R			7968	85	258			HSIFC66	Uni-ZAP XR
3692	HSOBF88R			7969	212	394			HSOBF88	Uni-ZAP XR
3693	HSODE15R			7970	355	444			HSODE15	Uni-ZAP XR
3694	HSVBO17R			7971	1	363			HSVBO17	Uni-ZAP XR
3695	HT4CI88R			7972	1	501			HT4CI88	Uni-ZAP XR
3696	HTGEL09R			7973	135	278			HTGEL09	Uni-ZAP XR
3697	HTXRF56R			7974	2	256			HTXRF56	Uni-ZAP XR
3698	HTYND19RA			7975	3	320			HTYND19	pSport1
3699	HTYSJ08Ra			7976	3	236			HTYSJ08	pBluescript
3700	HWACX88R			7977	3	191			HWACX88	pCMV Sport 3.0
3701	HWLMA16R			7978	110	253			HWLMA16	pSport1
3702	HWLMA24R			7979	2	190			HWLMA24	pSport1
3703	HWLMA58R			7980	242	475			HWLMA58	pSport1

3704	HWLMA60R			7981	198	347		HWLMA60	pSportl
3705	HWLMA75R			7982	273	458		HWLMA75	pSportl
3706	HWLMA91R			7983	161	469		HWLMA91	pSportl
3707	HWLMB42R			7984	68	262		HWLMB42	pSportl
3708	HWLMC65R			7985	88	204		HWLMC65	pSportl
3709	HWLMC79R			7986	181	348		HWLMC79	pSportl
3710	HWLMD83R			7987	3	437		HWLMD83	pSportl
3711	HWLME13R			7988	85	195		HWLME13	pSportl
3712	HWLME59R			7989	129	227		HWLME59	pSportl
3713	HWLME69R			7990	2	157		HWLME69	pSportl
3714	HWLME71R			7991	166	387		HWLME71	pSportl
3715	HWLME84R			7992	1	84		HWLME84	pSportl
3716	HWLMF91R			7993	11	94		HWLMF91	pSportl
3717	HWLMG12R			7994	1	111		HWLMG12	pSportl
3718	HWLMG15R			7995	1	153		HWLMG15	pSportl
3719	HWLMG30R			7996	1	246		HWLMG30	pSportl
3720	HWLMG39R			7997	2	106		HWLMG39	pSportl
3721	HWLMG54R			7998	38	235		HWLMG54	pSportl
3722	HWLMG56R			7999	2	136		HWLMG56	pSportl
3723	HWLMG57R			8000	1	249		HWLMG57	pSportl
3724	HWLMG63R			8001	1	99		HWLMG63	pSportl
3725	HWLMG84R			8002	2	394		HWLMG84	pSportl
3726	HWLMG95R			8003	73	216		HWLMG95	pSportl
3727	HWLMH11R			8004	216	344		HWLMH11	pSportl
3728	HWLMH24R			8005	35	103		HWLMH24	pSportl
3729	HWLMH50R			8006	110	220		HWLMH50	pSportl
3730	HWLM105R			8007	2	61		HWLM105	pSportl
3731	HWLM176R			8008	2	52		HWLM176	pSportl
3732	HWLM170R			8009	107	247		HWLM170	pSportl
3733	HWLMJ80R			8010	1	246		HWLMJ80	pSportl
3734	HWLMK20R			8011	57	176		HWLMK20	pSportl
3735	HWLMK25R			8012	1	99		HWLMK25	pSportl
3736	HWLMK31R			8013	3	278		HWLMK31	pSportl

3737	HWLMK62R			8014	8	187		HWLMK62	pSportl
3738	HWLMM68R			8015	10	198		HWLMM68	pSportl
3739	HWLMM93R			8016	1	48		HWLMM93	pSportl
3740	HWLMN01R			8017	2	112		HWLMN01	pSportl
3741	HWLMN51R			8018	18	119		HWLMN51	pSportl
3742	HWLMP20R			8019	2	202		HWLMP20	pSportl
3743	HWLMP58R			8020	2	190		HWLMP58	pSportl
3744	HWLMP60R			8021	1	48		HWLMP60	pSportl
3745	HWLMP71R			8022	1	63		HWLMP71	pSportl
3746	HWLMQ01R			8023	104	283		HWLMQ01	pSportl
3747	HWLMQ73R			8024	38	190		HWLMQ73	pSportl
3748	HWLMR23R			8025	2	67		HWLMR23	pSportl
3749	HWLMR69R			8026	3	347		HWLMR69	pSportl
3750	HWLMS31R			8027	2	103		HWLMS31	pSportl
3751	HWLMT42R			8028	2	103		HWLMT42	pSportl
3752	HWLMT57R			8029	1	111		HWLMT57	pSportl
3753	HWLMT64R			8030	3	110		HWLMT64	pSportl
3754	HWLMU07R			8031	48	143		HWLMU07	pSportl
3755	HWLMU13R			8032	4	123		HWLMU13	pSportl
3756	HWLMU26R			8033	377	583		HWLMU26	pSportl
3757	HWLMU41R			8034	3	203		HWLMU41	pSportl
3758	HWLMV34R			8035	2	94		HWLMV34	pSportl
3759	HWLMV60R			8036	137	343		HWLMV60	pSportl
3760	HWLMV66R			8037	1	99		HWLMV66	pSportl
3761	HWLMV70R			8038	204	344		HWLMV70	pSportl
3762	HWLMW93R			8039	3	275		HWLMW93	pSportl
3763	HWLMX13R			8040	103	285		HWLMX13	pSportl
3764	HWLMX67R			8041	158	349		HWLMX67	pSportl
3765	HWLMY52R			8042	2	121		HWLMY52	pSportl
3766	HWLMZ84R			8043	2	208		HWLMZ84	pSportl
3767	HWLND18R			8044	7	150		HWLND18	pSportl
3768	HWLND58R			8045	1	105		HWLND58	pSportl
3769	HWLND71R			8046	3	158		HWLND71	pSportl

3770	HWLNF67R				8047	357	524		HWLNF67	pSportI
3771	HWLNF68R				8048	2	73		HWLNF68	pSportI
3772	HWLNG81R				8049	1	54		HWLNG81	pSportI
3773	HWLNH76R				8050	1	150		HWLNH76	pSportI
3774	HWLNI43R				8051	1	99		HWLNI43	pSportI
3775	HWLNI93R				8052	25	111		HWLNI93	pSportI
3776	HWLNJ40R				8053	24	122		HWLNJ40	pSportI
3777	HWLNK59R				8054	1	75		HWLNK59	pSportI
3778	HWLNL41R				8055	2	382		HWLNL41	pSportI
3779	HWLNL71R				8056	1	66		HWLNL71	pSportI
3780	HWLNO22R				8057	35	190		HWLNO22	pSportI
3781	HWLNP11R				8058	1	51		HWLNP11	pSportI
3782	HWLNP22R				8059	2	226		HWLNP22	pSportI
3783	HWLNP43R				8060	53	250		HWLNP43	pSportI
3784	HWLNP65R				8061	322	477		HWLNP65	pSportI
3785	HWLNR24R				8062	1	225		HWLNR24	pSportI
3786	HWLNR26R				8063	84	176		HWLNR26	pSportI
3787	HWLNR27R				8064	3	50		HWLNR27	pSportI
3788	HWLNR48R				8065	25	108		HWLNR48	pSportI
3789	HWLNR57R				8066	25	153		HWLNR57	pSportI
3790	HWLNR81R				8067	136	195		HWLNR81	pSportI
3791	HWLNR83R				8068	3	161		HWLNR83	pSportI
3792	HWLNR92R				8069	1	51		HWLNR92	pSportI
3793	HWLNS19R				8070	44	109		HWLNS19	pSportI
3794	HWLNS37R				8071	2	88		HWLNS37	pSportI
3795	HWLNT23R				8072	2	82		HWLNT23	pSportI
3796	HWLNT40R				8073	1	177		HWLNT40	pSportI
3797	HWLNT48R				8074	2	94		HWLNT48	pSportI
3798	HWLNW90R				8075	2	238		HWLNW90	pSportI
3799	HWLNW92R				8076	2	88		HWLNW92	pSportI
3800	HWLNX01R				8077	70	249		HWLNX01	pSportI
3801	HWLNX64R				8078	1	54		HWLNX64	pSportI
3802	HWLNY25R				8079	2	238		HWLNY25	pSportI

3803	HWLNY40R					8080	2	100			HWLNY40	pSport1
3804	HWLNY67R					8081	3	125			HWLNY67	pSport1
3805	HWLNZ75R					8082	45	152			HWLNZ75	pSport1
3806	HWLOA09R					8083	3	293			HWLOA09	pSport1
3807	HWLOA83R					8084	109	276			HWLOA83	pSport1
3808	HWLOB93R					8085	2	73			HWLOB93	pSport1
3809	HWLOC19R	unnamed protein product [unidentified] Length = 180 emb[CAB6919 5.1]				8086	156	326	83	86	HWLOC19	pSport1
3810	HWLOC65R					8087	3	218			HWLOC65	pSport1
3811	HWLOE46R					8088	3	125			HWLOE46	pSport1
3812	HWLOF10R					8089	119	253			HWLOF10	pSport1
3813	HWLOF46R					8090	17	163			HWLOF46	pSport1
3814	HWLOF52R					8091	1	105			HWLOF52	pSport1
3815	HWLOF79R					8092	1	123			HWLOF79	pSport1
3816	HWLOG15R					8093	246	482			HWLOG15	pSport1
3817	HWLOG17R					8094	1	150			HWLOG17	pSport1
3818	HWLOG59R					8095	46	252			HWLOG59	pSport1
3819	HWLOI04R					8096	2	118			HWLOI04	pSport1
3820	HWLOI17R					8097	136	414			HWLOI17	pSport1
3821	HWLOI25R					8098	71	145			HWLOI25	pSport1
3822	HWLOI27R					8099	9	74			HWLOI27	pSport1
3823	HWLOI67R					8100	1	363			HWLOI67	pSport1
3824	HWLOI13R					8101	12	167			HWLOI13	pSport1
3825	HWLOI19R					8102	210	431			HWLOI19	pSport1
3826	HWLOI28R					8103	1	126			HWLOI28	pSport1
3827	HWLOJ51R					8104	6	167			HWLOJ51	pSport1
3828	HWLOK12R					8105	2	238			HWLOK12	pSport1
3829	HWLOK36R					8106	1	54			HWLOK36	pSport1
3830	HWLOK45R					8107	154	309			HWLOK45	pSport1
3831	HWLOK73R					8108	392	637			HWLOK73	pSport1
3832	HWLOK90R					8109	163	336			HWLOK90	pSport1
3833	HWLOL50R					8110	238	435			HWLOL50	pSport1
3834	HWLOM71R					8111	2	115			HWLOM71	pSport1

3835	HWLON66R				8112	1	69		HWLON66	pSportl
3836	HWLON71R				8113	1	66		HWLON71	pSportl
3837	HWLOO16R				8114	1	51		HWLOO16	pSportl
3838	HWLOQ52R				8115	102	215		HWLOQ52	pSportl
3839	HWLOR01R				8116	1	180		HWLOR01	pSportl
3840	HWLOR15R				8117	10	252		HWLOR15	pSportl
3841	HWLOR65R				8118	171	497		HWLOR65	pSportl
3842	HWLOS10R				8119	3	98		HWLOS10	pSportl
3843	HWLOS39R				8120	1	63		HWLOS39	pSportl
3844	HWLOS70R				8121	1	63		HWLOS70	pSportl
3845	HWLOT17R				8122	3	74		HWLOT17	pSportl
3846	HWLOT29R				8123	1	186		HWLOT29	pSportl
3847	HWLOT54R				8124	1	66		HWLOT54	pSportl
3848	HWLOU39R				8125	1	234		HWLOU39	pSportl
3849	HWLOU73R				8126	18	68		HWLOU73	pSportl
3850	HWLOU85R				8127	1	60		HWLOU85	pSportl
3851	HWLOV47R				8128	1	63		HWLOV47	pSportl
3852	HWLOV75R				8129	49	156		HWLOV75	pSportl
3853	HWLOV76R				8130	46	129		HWLOV76	pSportl
3854	HWLOV78R				8131	54	152		HWLOV78	pSportl
3855	HWLOX29R				8132	101	301		HWLOX29	pSportl
3856	HWLOX45R				8133	10	90		HWLOX45	pSportl
3857	HWLOY59R				8134	338	496		HWLOY59	pSportl
3858	HWLOY73R				8135	3	317		HWLOY73	pSportl
3859	HWLOZ31R				8136	1	60		HWLOZ31	pSportl
3860	HWLOZ87R				8137	29	268		HWLOZ87	pSportl
3861	HWLQA09R				8138	1	243		HWLQA09	pSportl
3862	HWLQA16R				8139	2	316		HWLQA16	pSportl
3863	HWLQA28R				8140	2	181		HWLQA28	pSportl
3864	HWLQA32R				8141	61	258		HWLQA32	pSportl
3865	HWLQA77R				8142	110	214		HWLQA77	pSportl
3866	HWLQB49R				8143	53	124		HWLQB49	pSportl
3867	HWLQC82R				8144	150	314		HWLQC82	pSportl

3868	HWLQD15R				8145	2	307			HWLQD15	pSportI
3869	HWLQD16R				8146	3	356			HWLQD16	pSportI
3870	HWLQD30R				8147	125	550			HWLQD30	pSportI
3871	HWLQD40R				8148	1	228			HWLQD40	pSportI
3872	HWLQD42R				8149	141	545			HWLQD42	pSportI
3873	HWLQD43R				8150	3	449			HWLQD43	pSportI
3874	HWLQD46R				8151	62	274			HWLQD46	pSportI
3875	HWLQD89R				8152	52	549			HWLQD89	pSportI
3876	HWLQD92R				8153	1	99			HWLQD92	pSportI
3877	HWLQD94R				8154	182	505			HWLQD94	pSportI
3878	HWLQE28R				8155	1	63			HWLQE28	pSportI
3879	HWLQE47R				8156	139	243			HWLQE47	pSportI
3880	HWLQE74R				8157	1	66			HWLQE74	pSportI
3881	HWLQE83R				8158	1	144			HWLQE83	pSportI
3882	HWLQE91R				8159	3	98			HWLQE91	pSportI
3883	HWLQF21R				8160	2	97			HWLQF21	pSportI
3884	HWLQF47R				8161	1	99			HWLQF47	pSportI
3885	HWLQF64R				8162	1	102			HWLQF64	pSportI
3886	HWLQF73R				8163	2	187			HWLQF73	pSportI
3887	HWLQH32R				8164	250	408			HWLQH32	pSportI
3888	HWLQH58R				8165	153	368			HWLQH58	pSportI
3889	HWLQH95R				8166	1	102			HWLQH95	pSportI
3890	HWLQI87R				8167	2	73			HWLQI87	pSportI
3891	HWLQK59R				8168	93	338			HWLQK59	pSportI
3892	HWLQM69R				8169	12	68			HWLQM69	pSportI
3893	HWLQM91R				8170	44	130			HWLQM91	pSportI
3894	HWLQN26R				8171	104	247			HWLQN26	pSportI
3895	HWLQN30R				8172	3	173			HWLQN30	pSportI
3896	HWLQN44R				8173	2	67			HWLQN44	pSportI
3897	HWLQPI5R				8174	1	219			HWLQPI5	pSportI
3898	HWLQPI8R				8175	2	124			HWLQPI8	pSportI
3899	HWLQP26R				8176	1	51			HWLQP26	pSportI
3900	HWLQQ83R				8177	122	334			HWLQQ83	pSportI



3901	HWLQR90R			8178	3	374		HWLQR90	pSportl
3902	HWLQR94R			8179	105	209		HWLQR94	pSportl
3903	HWLQT04R			8180	1	51		HWLQT04	pSportl
3904	HWLQT41R			8181	1	93		HWLQT41	pSportl
3905	HWLQT52R			8182	19	474		HWLQT52	pSportl
3906	HWLQT70R			8183	1	69		HWLQT70	pSportl
3907	HWLQU41R			8184	1	75		HWLQU41	pSportl
3908	HWLQU50R			8185	26	175		HWLQU50	pSportl
3909	HWLQU60R			8186	2	103		HWLQU60	pSportl
3910	HWLQW60R			8187	1	87		HWLQW60	pSportl
3911	HWLQW80R			8188	258	422		HWLQW86	pSportl
3912	HWLQX77R			8189	9	71		HWLQX77	pSportl
3913	HWLQY73R			8190	1	105		HWLQY73	pSportl
3914	HWLRB15R			8191	142	699		HWLRB15	pSportl
3915	HWLRC07R			8192	1	69		HWLRC07	pSportl
3916	HWLRC56R			8193	1	87		HWLRC56	pSportl
3917	HWLRE01R			8194	85	312		HWLRE01	pSportl
3918	HWLRE49R			8195	235	381		HWLRE49	pSportl
3919	HWLRF43R			8196	164	355		HWLRF43	pSportl
3920	HWLRF74R			8197	54	239		HWLRF74	pSportl
3921	HWLRH34R			8198	3	80		HWLRH34	pSportl
3922	HWLRH55R			8199	1	138		HWLRH55	pSportl
3923	HWLRH68R			8200	3	263		HWLRH68	pSportl
3924	HWLRL65R			8201	1	264		HWLRL65	pSportl
3925	HWLRM35R			8202	53	115		HWLRM35	pSportl
3926	HWLRM93R			8203	1	102		HWLRM93	pSportl
3927	HWLRN30R			8204	1	99		HWLRN30	pSportl
3928	HWLRN32R			8205	1	99		HWLRN32	pSportl
3929	HWLRO35R			8206	111	314		HWLRO35	pSportl
3930	HWLRO92R			8207	3	155		HWLRO92	pSportl
3931	HWLRP18R			8208	6	113		HWLRP18	pSportl
3932	HWLRP48R			8209	1	99		HWLRP48	pSportl
3933	HWLRP84R			8210	1	99		HWLRP84	pSportl

3934	HWLRQ43R				8211	1	99			HWLRQ43	pSportI
3935	HWLRR85R				8212	1	51			HWLRR85	pSportI
3936	HWLRS49R				8213	3	86			HWLRS49	pSportI
3937	HWLRS85R				8214	14	79			HWLRS85	pSportI
3938	HWLRT45R				8215	3	65			HWLRT45	pSportI
3939	HWLRT46R				8216	30	116			HWLRT46	pSportI
3940	HWLRT77R				8217	89	187			HWLRT77	pSportI
3941	HWLRV63R				8218	3	398			HWLRV63	pSportI
3942	HWLUF10R				8219	1	129			HWLUF10	pSportI
3943	HWLUF62R				8220	126	281			HWLUF62	pSportI
3944	HWLUG36R				8221	2	52			HWLUG36	pSportI
3945	HWLUG53R				8222	109	255			HWLUG53	pSportI
3946	HWLUG72R				8223	2	145			HWLUG72	pSportI
3947	HWLUH57R				8224	3	68			HWLUH57	pSportI
3948	HWLUH72R				8225	2	334			HWLUH72	pSportI
3949	HWLUH79R				8226	54	179			HWLUH79	pSportI
3950	HWLUJ44R				8227	39	95			HWLUJ44	pSportI
3951	HWLUJ55R				8228	1	312			HWLUJ55	pSportI
3952	HWLUJ83R				8229	24	155			HWLUJ83	pSportI
3953	HWLUJ04R				8230	20	130			HWLUJ04	pSportI
3954	HWLUJ19R				8231	1	390			HWLUJ19	pSportI
3955	HWLUJ46R				8232	3	137			HWLUJ46	pSportI
3956	HWLUL02R				8233	37	186			HWLUL02	pSportI
3957	HWLUL39R				8234	1	114			HWLUL39	pSportI
3958	HWLUL44R				8235	1	126			HWLUL44	pSportI
3959	HWLUL47R				8236	56	202			HWLUL47	pSportI
3960	HWLUL65R				8237	30	134			HWLUL65	pSportI
3961	HWLUN02R				8238	2	53			HWLUN02	pSportI
3962	HWLUN03R				8239	1	150			HWLUN03	pSportI
3963	HWLUN23R				8240	1	216			HWLUN23	pSportI
3964	HWLUN46R				8241	3	122			HWLUN46	pSportI
3965	HWLUN55R				8242	73	138			HWLUN55	pSportI
3966	HWLUN76R				8243	1	117			HWLUN76	pSportI

3967	HWLUN77R			8244	31	102		HWLUN77	pSportI
3968	HWLUN78R			8245	59	196		HWLUN78	pSportI
3969	HWLUN94R			8246	1	54		HWLUN94	pSportI
3970	HWLUO12R			8247	1	48		HWLUO12	pSportI
3971	HWLUP38R			8248	12	92		HWLUP38	pSportI
3972	HWLUP63R			8249	102	221		HWLUP63	pSportI
3973	HWLUQ35R			8250	2	151		HWLUQ35	pSportI
3974	HWLUQ51R			8251	2	154		HWLUQ51	pSportI
3975	HWLUQ54R			8252	3	98		HWLUQ54	pSportI
3976	HWLUQ79R			8253	1	66		HWLUQ79	pSportI
3977	HWLUQ87R			8254	149	289		HWLUQ87	pSportI
3978	HWLUQ94R			8255	2	178		HWLUQ94	pSportI
3979	HWLUR41R			8256	33	155		HWLUR41	pSportI
3980	HWLUT21R			8257	1	57		HWLUT21	pSportI
3981	HWLUT89R			8258	1	81		HWLUT89	pSportI
3982	HWLUT94R			8259	43	144		HWLUT94	pSportI
3983	HWLUU23R			8260	2	133		HWLUU23	pSportI
3984	HWLUU88R			8261	40	192		HWLUU88	pSportI
3985	HWLUV35R			8262	68	235		HWLUV35	pSportI
3986	HWLUV39R			8263	1	54		HWLUV39	pSportI
3987	HWLUV67R			8264	1	72		HWLUV67	pSportI
3988	HWLUX01R			8265	10	108		HWLUX01	pSportI
3989	HWLUX69R			8266	2	103		HWLUX69	pSportI
3990	HWLUX81R			8267	2	85		HWLUX81	pSportI
3991	HWLUX84R			8268	1	66		HWLUX84	pSportI
3992	HWLUZ07R			8269	2	127		HWLUZ07	pSportI
3993	HWLVA61R			8270	1	144		HWLVA61	pSportI
3994	HWLVA72R			8271	251	382		HWLVA72	pSportI
3995	HWLVA88R			8272	4	111		HWLVA88	pSportI
3996	HWLVB32R			8273	89	229		HWLVB32	pSportI
3997	HWLVB85R			8274	3	68		HWLVB85	pSportI
3998	HWLVD26R			8275	31	309		HWLVD26	pSportI
3999	HWLVD49R			8276	3	113		HWLVD49	pSportI

4000	HWLVD67R				8277	2	82		HWLVD67	pSportI
4001	HWLVD74R				8278	3	89		HWLVD74	pSportI
4002	HWLVE21R				8279	73	297		HWLVE21	pSportI
4003	HWLVF10R				8280	170	325		HWLVF10	pSportI
4004	HWLVF28R				8281	25	180		HWLVF28	pSportI
4005	HWLVF34R				8282	258	443		HWLVF34	pSportI
4006	HWLVH04R				8283	3	158		HWLVH04	pSportI
4007	HWLVH16R				8284	3	122		HWLVH16	pSportI
4008	HWLVH17R				8285	1	141		HWLVH17	pSportI
4009	HWLVH67R				8286	1	132		HWLVH67	pSportI
4010	HWLV140R				8287	2	169		HWLV140	pSportI
4011	HWLV141R				8288	118	267		HWLV141	pSportI
4012	HWLV115R				8289	1	186		HWLV115	pSportI
4013	HWLV184R				8290	2	190		HWLV184	pSportI
4014	HWLVK46R				8291	2	226		HWLVK46	pSportI
4015	HWLVK62R				8292	3	65		HWLVK62	pSportI
4016	HWLVK88R				8293	1	90		HWLVK88	pSportI
4017	HWLVK91R				8294	3	101		HWLVK91	pSportI
4018	HWLV10R				8295	2	226		HWLV10	pSportI
4019	HWLV171R				8296	2	100		HWLV171	pSportI
4020	HWLV181R				8297	1	105		HWLV181	pSportI
4021	HWLV105R				8298	61	129		HWLV105	pSportI
4022	HWLV123R				8299	1	57		HWLV123	pSportI
4023	HWLV149R				8300	3	134		HWLV149	pSportI
4024	HWLV12R				8301	112	231		HWLV12	pSportI
4025	HWLV173R				8302	3	101		HWLV173	pSportI
4026	HWLV179R				8303	2	109		HWLV179	pSportI
4027	HWLV130R				8304	126	227		HWLV130	pSportI
4028	HWLV140R				8305	2	70		HWLV140	pSportI
4029	HWLV192R				8306	162	407		HWLV192	pSportI
4030	HWLV121R				8307	1	69		HWLV121	pSportI
4031	HWLV140R				8308	18	407		HWLV140	pSportI
4032	HWLV136R				8309	3	251		HWLV136	pSportI

4033	HWLVV06R				8310	3	92			HWLVV06	pSport1
4034	HWLVV31R				8311	14	259			HWLVV31	pSport1
4035	HWLVV64R				8312	3	242			HWLVV64	pSport1
4036	HWLVV87R				8313	11	163			HWLVV87	pSport1
4037	HWLVW22R				8314	1	174			HWLVW22	pSport1
4038	HWLVW49R				8315	123	293			HWLVW49	pSport1
4039	HWLVW56R				8316	3	86			HWLVW56	pSport1
4040	HWLVW89R				8317	20	58			HWLVW89	pSport1
4041	HWLVX39R				8318	3	104			HWLVX39	pSport1
4042	HWLVX75R				8319	146	412			HWLVX75	pSport1
4043	HWLVY14R				8320	3	110			HWLVY14	pSport1
4044	HWLVY55R				8321	2	55			HWLVY55	pSport1
4045	HWLVY65R				8322	209	373			HWLVY65	pSport1
4046	HWLVZ12R				8323	3	53			HWLVZ12	pSport1
4047	HWLWA14R				8324	146	361			HWLWA14	pSport1
4048	HWLWA82R				8325	82	366			HWLWA82	pSport1
4049	HWLWA91R				8326	1	123			HWLWA91	pSport1
4050	HWLWB01R				8327	50	211			HWLWB01	pSport1
4051	HWLWB05R				8328	62	160			HWLWB05	pSport1
4052	HWLWB42R				8329	2	142			HWLWB42	pSport1
4053	HWLWB60R				8330	1	105			HWLWB60	pSport1
4054	HWLWB71R				8331	94	300			HWLWB71	pSport1
4055	HWLWB73R				8332	1	156			HWLWB73	pSport1
4056	HWLWB77R	(AK000419) unnamed protein product [Homo sapiens] >gb AF36534.1 (AF154829) 5'(3')-deoxyribonucleotidase [Homo sapiens] {SUB 50-201} Length = 201	dbj BAA911151.1		8333	66	374	93	93	HWLWB77	pSport1
4057	HWLWD32R				8334	26	193			HWLWD32	pSport1
4058	HWLWD56R				8335	149	343			HWLWD56	pSport1
4059	HWLWD60R				8336	156	317			HWLWD60	pSport1
4060	HWLWD66R				8337	2	184			HWLWD66	pSport1
4061	HWLWE25R				8338	95	316			HWLWE25	pSport1
4062	HWLWE80R				8339	1	102			HWLWE80	pSport1

4063	HWLWE81R				8340	3	149			HWLWE81	pSport1
4064	HWLWG36R				8341	1	72			HWLWG36	pSport1
4065	HWLWH49R				8342	6	104			HWLWH49	pSport1
4066	HWLWH93R				8343	1	69			HWLWH93	pSport1
4067	HWLWI26R				8344	2	52			HWLWI26	pSport1
4068	HWLWI69R				8345	8	166			HWLWI69	pSport1
4069	HWLWJ36R				8346	172	348			HWLWJ36	pSport1
4070	HWLWJ37R				8347	1	114			HWLWJ37	pSport1
4071	HWLWK48R				8348	1	39			HWLWK48	pSport1
4072	HWLWM95R				8349	2	88			HWLWM95	pSport1
4073	HWLWN12R				8350	3	98			HWLWN12	pSport1
4074	HWLWN42R				8351	1	51			HWLWN42	pSport1
4075	HWLWN48R				8352	20	256			HWLWN48	pSport1
4076	HWLWO57R	(AK001650) unnamed protein product [Homo sapiens] Length = 216	dbj BAA91810.1		8353	3	131	73	78	HWLWO57	pSport1
4077	HWLWO64R				8354	2	223			HWLWO64	pSport1
4078	HWLWO78R				8355	1	150			HWLWO78	pSport1
4079	HWLWP03R				8356	76	165			HWLWP03	pSport1
4080	HWLWP08R				8357	3	98			HWLWP08	pSport1
4081	HWLWP13R				8358	2	136			HWLWP13	pSport1
4082	HWLWP15R				8359	1	276			HWLWP15	pSport1
4083	HWLWP50R				8360	226	414			HWLWP50	pSport1
4084	HWLWP87R				8361	26	301			HWLWP87	pSport1
4085	HWLWQ05R				8362	2	82			HWLWQ05	pSport1
4086	HWLWQ49R				8363	3	146			HWLWQ49	pSport1
4087	HWLWR11R				8364	80	175			HWLWR11	pSport1
4088	HWLWR26R				8365	196	315			HWLWR26	pSport1
4089	HWLWR30R				8366	2	247			HWLWR30	pSport1
4090	HWLWS17R				8367	1	51			HWLWS17	pSport1
4091	HWLWS19R				8368	3	266			HWLWS19	pSport1
4092	HWLWS28R				8369	3	179			HWLWS28	pSport1
4093	HWLWS43R				8370	2	97			HWLWS43	pSport1
4094	HWLWS64R				8371	1	144			HWLWS64	pSport1

4095	HWLWU16R			8372	121	240		HWLWU16	pSport1
4096	HWLWU27R			8373	92	253		HWLWU27	pSport1
4097	HWLWW46R			8374	1	222		HWLWW46	pSport1
4098	HWLWW78R			8375	1	234		HWLWW78	pSport1
4099	HWLWW79R			8376	24	65		HWLWW79	pSport1
4100	HWLWX07R			8377	19	168		HWLWX07	pSport1
4101	HWLWX66R			8378	2	64		HWLWX66	pSport1
4102	HWLWX68R			8379	1	51		HWLWX68	pSport1
4103	HWLXA13R			8380	1	171		HWLXA13	pSport1
4104	HWLXA23R			8381	2	226		HWLXA23	pSport1
4105	HWLXA45R			8382	2	145		HWLXA45	pSport1
4106	HWLXC34R			8383	36	188		HWLXC34	pSport1
4107	HWLXE61R			8384	223	477		HWLXE61	pSport1
4108	HWLXE79R			8385	1	63		HWLXE79	pSport1
4109	HWLXI51R			8386	1	54		HWLXI51	pSport1
4110	HWLXI76R			8387	86	322		HWLXI76	pSport1
4111	HWLXI59R			8388	2	139		HWLXI59	pSport1
4112	HWLXI79R			8389	135	296		HWLXI79	pSport1
4113	HWLXK62R			8390	377	529		HWLXK62	pSport1
4114	HWLXN33R			8391	2	67		HWLXN33	pSport1
4115	HWLXO57R			8392	2	211		HWLXO57	pSport1
4116	HWLXO71R			8393	30	101		HWLXO71	pSport1
4117	HWLXO81R			8394	3	206		HWLXO81	pSport1
4118	HWLXP33R			8395	1	69		HWLXP33	pSport1
4119	HWLXP45R			8396	2	196		HWLXP45	pSport1
4120	HWLXP60R			8397	2	109		HWLXP60	pSport1
4121	HWLXQ33R			8398	2	52		HWLXQ33	pSport1
4122	HWLXQ50R			8399	2	52		HWLXQ50	pSport1
4123	HWLXQ71R			8400	3	236		HWLXQ71	pSport1
4124	HWLXQ81R			8401	3	110		HWLXQ81	pSport1
4125	HWLXR27R			8402	44	226		HWLXR27	pSport1
4126	HWLXR49R			8403	2	142		HWLXR49	pSport1
4127	HWLXR74R			8404	10	240		HWLXR74	pSport1

4128	HWLXT31R				8405	138	284		HWLXT31	pSport1	
4129	HWLXV15R				8406	1	150		HWLXV15	pSport1	
4130	HWLXV27R				8407	1	129		HWLXV27	pSport1	
4131	HWLXW17R				8408	2	115		HWLXW17	pSport1	
4132	HWLXW20R				8409	32	130		HWLXW20	pSport1	
4133	HWMB46R				8410	114	212		HWMB46	pSport1	
4134	HWMBD22R				8411	32	433		HWMBD22	pSport1	
4135	HWMBD49R				8412	2	61		HWMBD49	pSport1	
4136	HWMBD71R				8413	3	131		HWMBD71	pSport1	
4137	HWMBE31R	(AF169797) adaptor protein APPL [Homo sapiens] >sp AAAF04012 AAAF04012 Adaptor protein APPL. Length = 709	gb AAAF04012.1 AF1697		8414	1	408	60	72	HWMBE31	pSport1
4138	HWMBE36R				8415	90	221		HWMBE36	pSport1	
4139	HWMBF87R				8416	209	388		HWMBF87	pSport1	
4140	HWMBG63R				8417	1	54		HWMBG63	pSport1	
4141	HWMBG89R				8418	2	142		HWMBG89	pSport1	
4142	HWMBH14R				8419	1	93		HWMBH14	pSport1	
4143	HWMBI08R				8420	1	315		HWMBI08	pSport1	
4144	HWMBI41R				8421	176	313		HWMBI41	pSport1	
4145	HWMBI51R				8422	1	150		HWMBI51	pSport1	
4146	HWMBK47R				8423	131	313		HWMBK47	pSport1	
4147	HWMBL07R				8424	6	206		HWMBL07	pSport1	
4148	HWMBL29R				8425	196	396		HWMBL29	pSport1	
4149	HWMBL57R				8426	121	330		HWMBL57	pSport1	
4150	HWMBL82R				8427	17	496		HWMBL82	pSport1	
4151	HWMBM40R				8428	87	218		HWMBM40	pSport1	
4152	HWMBM51R				8429	2	70		HWMBM51	pSport1	
4153	HWMBM67R				8430	81	221		HWMBM67	pSport1	
4154	HWMBM83R				8431	141	299		HWMBM83	pSport1	
4155	HWMBM87R				8432	2	136		HWMBM87	pSport1	
4156	HWMBN13R				8433	2	163		HWMBN13	pSport1	
4157	HWMBN35R				8434	185	355		HWMBN35	pSport1	
4158	HWMBN52R				8435	104	274		HWMBN52	pSport1	



4159	HWMBN94R			8436	29	133			HWMBN94	pSportI
4160	HWMBP01R			8437	1	84			HWMBP01	pSportI
4161	HWMBP39R			8438	81	308			HWMBP39	pSportI
4162	HWMBP60R			8439	3	125			HWMBP60	pSportI
4163	HWMBP67R			8440	3	143			HWMBP67	pSportI
4164	HWMBP84R			8441	2	229			HWMBP84	pSportI
4165	HWMBR18R			8442	2	133			HWMBR18	pSportI
4166	HWMBR40R			8443	2	130			HWMBR40	pSportI
4167	HWMBR50R			8444	1	117			HWMBR50	pSportI
4168	HWMBR64R			8445	1	156			HWMBR64	pSportI
4169	HWMBR68R			8446	1	150			HWMBR68	pSportI
4170	HWMBR75R			8447	2	124			HWMBR75	pSportI
4171	HWMBR77R A			8448	2	103			HWMBR77	pSportI
4172	HWMBR79R			8449	1	192			HWMBR79	pSportI
4173	HWMBR06R			8450	1	150			HWMBR06	pSportI
4174	HWMBR28R			8451	2	184			HWMBR28	pSportI
4175	HWMBR57R			8452	3	131			HWMBR57	pSportI
4176	HWMBR87R			8453	19	180			HWMBR87	pSportI
4177	HWMBT23R			8454	43	294			HWMBT23	pSportI
4178	HWMBT71R			8455	52	165			HWMBT71	pSportI
4179	HWMBU43R			8456	91	297			HWMBU43	pSportI
4180	HWMBU67R			8457	1	123			HWMBU67	pSportI
4181	HWMBV48R			8458	49	339			HWMBV48	pSportI
4182	HWMBW45R			8459	3	140			HWMBW45	pSportI
4183	HWMBW54R			8460	26	214			HWMBW54	pSportI
4184	HWMBX10R			8461	23	76			HWMBX10	pSportI
4185	HWMBX94R			8462	3	65			HWMBX94	pSportI
4186	HWMBY09R			8463	24	122			HWMBY09	pSportI
4187	HWMBY34R			8464	65	172			HWMBY34	pSportI
4188	HWMBY51R			8465	1	138			HWMBY51	pSportI
4189	HWMBY90R			8466	2	67			HWMBY90	pSportI
4190	HWMBZ52R			8467	250	411			HWMBZ52	pSportI

4191	HWMBZ60R				8468	3	74		HWMBZ60	pSportI
4192	HWMBZ74R				8469	19	210		HWMBZ74	pSportI
4193	HWMBZ84R				8470	6	161		HWMBZ84	pSportI
4194	HWMA93R				8471	41	238		HWMA93	pSportI
4195	HWMCB01R				8472	1	108		HWMCB01	pSportI
4196	HWMCB93R				8473	3	233		HWMCB93	pSportI
4197	HWMC11R				8474	169	375		HWMC11	pSportI
4198	HWMC55R				8475	3	59		HWMC55	pSportI
4199	HWMC17R				8476	95	232		HWMC17	pSportI
4200	HWMC164R				8477	1	36		HWMC164	pSportI
4201	HWMC166R				8478	3	158		HWMC166	pSportI
4202	HWMC21R				8479	2	49		HWMC21	pSportI
4203	HWMC24R				8480	394	615		HWMC24	pSportI
4204	HWMC24R				8481	3	92		HWMC24	pSportI
4205	HWMC45R				8482	2	127		HWMC45	pSportI
4206	HWMC102R				8483	11	220		HWMC102	pSportI
4207	HWMC47R				8484	3	203		HWMC47	pSportI
4208	HWMC76R				8485	3	140		HWMC76	pSportI
4209	HWMC103R				8486	3	254		HWMC103	pSportI
4210	HWMC105R				8487	2	115		HWMC105	pSportI
4211	HWMC107R				8488	1	213		HWMC107	pSportI
4212	HWMC113R				8489	2	103		HWMC113	pSportI
4213	HWMC114R				8490	3	161		HWMC114	pSportI
4214	HWMC115R				8491	2	124		HWMC115	pSportI
4215	HWMC116R				8492	29	124		HWMC116	pSportI
4216	HWMC119R				8493	40	225		HWMC119	pSportI
4217	HWMC125R				8494	1	126		HWMC125	pSportI
4218	HWMC127R				8495	15	224		HWMC127	pSportI
4219	HWMC129R				8496	3	137		HWMC129	pSportI
4220	HWMC130R				8497	2	211		HWMC130	pSportI
4221	HWMC132R				8498	17	217		HWMC132	pSportI
4222	HWMC139R				8499	5	133		HWMC139	pSportI
4223	HWMC140R				8500	20	112		HWMC140	pSportI

4224	HWMCI41R			8501	2	199		HWMCI41	pSportl
4225	HWMCI42R			8502	1	102		HWMCI42	pSportl
4226	HWMCI43R			8503	6	134		HWMCI43	pSportl
4227	HWMCI44R			8504	6	143		HWMCI44	pSportl
4228	HWMCI50R			8505	2	211		HWMCI50	pSportl
4229	HWMCI53R			8506	41	145		HWMCI53	pSportl
4230	HWMCI55R			8507	2	169		HWMCI55	pSportl
4231	HWMCI56R			8508	22	114		HWMCI56	pSportl
4232	HWMCI62R			8509	2	253		HWMCI62	pSportl
4233	HWMCI80R			8510	1	102		HWMCI80	pSportl
4234	HWMCI85R			8511	110	202		HWMCI85	pSportl
4235	HWMCI87R			8512	2	193		HWMCI87	pSportl
4236	HWMCI88R			8513	2	100		HWMCI88	pSportl
4237	HWMCI92R			8514	78	305		HWMCI92	pSportl
4238	HWMCI42R			8515	1	120		HWMCI42	pSportl
4239	HWMCK88R			8516	13	204		HWMCK88	pSportl
4240	HWMCK92R			8517	3	242		HWMCK92	pSportl
4241	HWMCI13R			8518	2	130		HWMCI13	pSportl
4242	HWMCI18R			8519	2	145		HWMCI18	pSportl
4243	HWMCI44R			8520	1	300		HWMCI44	pSportl
4244	HWMCI55R			8521	150	317		HWMCI55	pSportl
4245	HWMCI61R			8522	43	162		HWMCI61	pSportl
4246	HWMCI65R			8523	3	98		HWMCI65	pSportl
4247	HWMCI68R			8524	2	106		HWMCI68	pSportl
4248	HWMCI74R			8525	1	162		HWMCI74	pSportl
4249	HWMCI18R			8526	3	194		HWMCI18	pSportl
4250	HWMCI19R			8527	45	185		HWMCI19	pSportl
4251	HWMCI32R			8528	72	179		HWMCI32	pSportl
4252	HWMCI39R			8529	52	132		HWMCI39	pSportl
4253	HWMCI61R			8530	1	114		HWMCI61	pSportl
4254	HWMCI67R			8531	3	104		HWMCI67	pSportl
4255	HWMCI75R			8532	1	141		HWMCI75	pSportl
4256	HWMCI77R			8533	3	134		HWMCI77	pSportl

4257	HWMCM80R			8534	3	170			HWMCM80	pSport1
4258	HWMCM85R			8535	2	100			HWMCM85	pSport1
4259	HWMCM89R			8536	3	104			HWMCM89	pSport1
4260	HWMCM92R			8537	8	52			HWMCM92	pSport1
4261	HWTBE01R			8538	2	244			HWTBE01	Uni-ZAP XR
4262	HCQDD08R			8539	111	1			HCQDD08	Lambda ZAP II
4263	H2CBK69R	unnamed protein product [Homo sapiens] >emb CAA88750.1 TX protease precursor [Homo sapiens] >gb AAA75171.1 cysteine protease [Homo sapiens] >gb AAA86890.1 Ich-2 [Homo sapiens] >gb AAC99850.1 Mih1/TX isoform alpha [Homo sapiens] >pir A57511 A57511 inte	emb CAA0315 4.1	8540	257	535	98	98	H2CBK69	pBluescript SK-
4264	H2CBD14R	unnamed protein product [unidentified] >emb CAB41416.1 (AJ238246) sarcolectin [Homo sapiens] >sp Q9Y3R7 Q9Y3R7 SARCOLECTIN. >emb CAA03727.1 unnamed protein product [unidentified] {SUB 1-135} Length = 469	emb CAA0372 6.1	8541	180	539	88	89	H2CBD14	pBluescript SK-
4265	HCQCJ66R			8542	20	233			HCQCJ66	Lambda ZAP II
4266	HCYBO53R	IDN4-GGTR14 PROTEIN. >db BAA77334.1  (AB019493) IDN4-GGTR9 [Homo sapiens] {SUB 57-414} >emb CAA22908.1 (AL035303) hypothetical protein [Homo sapiens] {SUB 159-414} Length = 414	sp Q9Y6Y5 Q9Y6Y5	8543	3	107	100	100	HCYBO53	pBluescript SK-
4267	HWMCK51R	unnamed protein product [unidentified] Length = 396	emb CAA0339 6.1	8544	24	284	95	95	HWMCK51	pSport1

4268	HCQCA92R	URF 2 (NADH dehydrogenase subunit) [Homo sapiens] >gb AAC25441.1  (AF014882) NADH dehydrogenase subunit 2 [Homo sapiens] >gb AAC25443.1  (AF014884) NADH dehydrogenase subunit 2 [Homo sapiens] >gb AAC25444.1  (AF014885) NADH dehydrogenase subunit 2 [Homo sapiens]	emb CAA2402.7.1	8545	73	231	57	63	HCQCA92	Lambda ZAP II
4269	HCQDK77R			8546	157	432			HCQDK77	Lambda ZAP II
4270	HDTEO77R	NADH dehydrogenase subunit 3 [Pan troglodytes] >dbj BAA85273.1  NADH dehydrogenase subunit 3 [Pan troglodytes] >sp BAA85273 BAA85273 NADH dehydrogenase subunit 3. Length = 115	dbj BAA85273.1	8547	72	230	87	96	HDTEO77	pCMVSPORT 2.0
4271	HCRNC15R	(AF102177) tumor antigen SLP-8p [Homo sapiens] Length = 966	gb AAF37319.1 AF1021	8548	3	539	98	99	HCRNC15	pSport1
4272	HWLRD05R	(AF155103) NY-REN-25 antigen [Homo sapiens] >sp Q9Y5A3 Q9Y5A3 NY-REN-25 ANTIGEN (FRAGMENT). Length = 285	gb AAD42869.1 AF1551	8549	2	496	62	73	HWLRD05	pSport1
4273	HPWBS43R	Whole ORF continues from bp19 (right after "tag") to bp1596 ("tag"); similar to chinese hamster phosphatidylserine synthase. [Homo sapiens] >sp P48651 PSS1_HUMAN PHOSPHATIDYL SERINE SYNTHASE I (SERINE-EXCHANGE ENZYME I) (EC 2.7.8.-) (K1AA0024). Length	dbj BAA03520.1	8550	2	130	76	78	HPWBS43	Uni-ZAP XR
4274	H2CBU94R	(AL031393) dJ733D15.1 (Zinc-finger protein) [Homo sapiens] Length = 496	emb CAA2056.4.1	8551	1	360	52	68	H2CBU94	pBluescript SK-
4275	H2LAT50R	(AF080171) zinc finger protein ZNF232 [Homo sapiens] >sp AAD46135 AAD46135 Zinc finger protein ZNF232. Length = 417	gb AAD46135.1	8552	73	537	100	100	H2LAT50	pBluescript SK-
4276	HCQCO58R	zinc finger protein [Homo sapiens] >sp Q15917 Q15917 ZINC FINGER PROTEIN (FRAGMENT). Length = 622	gb AAA36817.1	8553	30	158	32	44	HCQCO58	Lambda ZAP II
4277	HWMCC56R			8554	206	3			HWMCC56	pSport1

The first column of Table 1 shows the "SEQ ID NO:X" for each of the 4277 polynucleotide sequences of the invention. The second column provides a unique "Sequence/Contig ID" for each sequence.

5 The third column in Table 1, "Gene Name", provides a putative identification of the gene based on the sequence similarity of its translation product to an amino acid sequence found in a publicly accessible gene database, such as GenBank (NCBI). Methods for determining such sequence similarity are described in Example 1, below. The great majority of the cDNA sequences reported in Table 1 are unrelated to any sequences previously described in the literature. The fourth column in Table  
10 1, "Overlap," provides the database accession no. for the database sequence having similarity.

The preferred translated amino acid sequence, is identified in column five as "AA SEQ ID NO:Y," although other reading frames can also be easily translated using known molecular biology techniques. The polypeptides produced by these  
15 alternative open reading frames are specifically contemplated by the present invention. Polynucleotides encoding an amino acid sequence comprising these regions are also embodied, as are polynucleotides which hybridize to polynucleotides encoding these regions.

The sixth and seventh columns in Table 1 provide the location (nucleotide  
20 position nos.), "Start" and "End," in the polynucleotide sequence "SEQ ID NO:X" that aligns with homologous database sequence. In one embodiment, the invention provides a polypeptide comprising an amino acid sequence encoded by the portion of SEQ ID NO:X delineated by "Start" and "End". Also provided are polynucleotides encoding such polypeptides.

25 The eighth and ninth columns provide the "%Id" (percent identity) and "% Si" (percent similarity) observed between the aligned sequence segments of the translation product of SEQ ID NO:X and the database sequence. The eleventh and twelfth columns shown in Table 1 provide a unique Clone identifier (Clone ID:Z) and the Cloning vector contained in the cDNA Clone ID, respectively. At least a portion  
30 of SEQ ID NO:X was determined by directly sequencing the referenced clone. The reference clone may have more sequence than described in the sequence listing or the clone may have less. In the vast majority of cases, however, the clone is believed to

encode a full-length polypeptide. In the case where a clone is not full-length, a full-length cDNA can be obtained by methods described elsewhere herein.

SEQ ID NO:X and the translated SEQ ID NO:Y are sufficiently accurate and otherwise suitable for a variety of uses well known in the art and described further below. For instance, SEQ ID NO:X is useful for designing nucleic acid hybridization probes that will detect nucleic acid sequences contained in SEQ ID NO:X or the cDNA contained in the deposited clone. These probes will also hybridize to nucleic acid molecules in biological samples, thereby enabling immediate applications in chromosome mapping, linkage analysis, tissue identification and/or typing, and a variety of forensic and diagnostic methods of the invention. Similarly, polypeptides identified from SEQ ID NO:Y may be used to generate antibodies which bind specifically to the colon and/or colon cancer related antigen polypeptides encoded by the cDNA clones identified in Table 1.

Nevertheless, DNA sequences generated by sequencing reactions can contain sequencing errors. The errors exist as misidentified nucleotides, or as insertions or deletions of nucleotides in the generated DNA sequence. The erroneously inserted or deleted nucleotides cause frame shifts in the reading frames of the predicted amino acid sequence. In these cases, the predicted amino acid sequence diverges from the actual amino acid sequence, even though the generated DNA sequence may be greater than 99.9% identical to the actual DNA sequence (for example, one base insertion or deletion in an open reading frame of over 1000 bases).

Accordingly, for those applications requiring precision in the nucleotide sequence or the amino acid sequence, the present invention provides not only the generated nucleotide sequence identified as SEQ ID NO:X and the predicted translated amino acid sequence identified as SEQ ID NO:Y, but also a sample of plasmid DNA containing a human cDNA of the invention deposited with the ATCC, as set forth in Table 1. The nucleotide sequence of each deposited clone can readily be determined by sequencing the deposited clone in accordance with known methods. The predicted amino acid sequence can then be verified from such deposits. Moreover, the amino acid sequence of the protein encoded by a particular clone can also be directly determined by peptide sequencing or by expressing the protein in a

suitable host cell containing the deposited human cDNA, collecting the protein, and determining its sequence.

The present invention also relates to vectors or plasmids which include such DNA sequences, as well as the use of the DNA sequences. Table 2 shows the material  
5 deposited with the ATCC, the Deposit Date and the ATCC Designation Number.

**Table 2**

ATCC Deposits	Deposit Date	ATCC Designation Number
LP01, LP02, LP03, LP04, LP05, LP06, LP07, LP08, LP09, LP10, LP11,	May-20-97	209059, 209060, 209061, 209062, 209063, 209064, 209065, 209066, 209067, 209068, 209069
LP12	Jan-12-98	209579
LP13	Jan-12-98	209578
LP14	Jul-16-98	203067
LP15	Jul-16-98	203068
LP16	Feb-1-99	203609
LP17	Feb-1-99	203610
LP20	Nov-17-98	203485
LP21	Jun-18-99	PTA-252
LP22	Jun-18-99	PTA-253
PA-005 Phage, PA-005 DNA	Oct-28-99	PTA-881 PTA-882

each is a mixture of cDNA clones derived from a variety of human tissue and cloned  
10 in either a plasmid vector or a phage vector, as shown in Table 9. These deposits are referred to as "the deposits" herein. The tissues from which the clones were derived are listed in Table 9, and the vector in which the cDNA is contained is also indicated in Table 9 as well as Table 1. The deposited material includes the cDNA clones which were partially sequenced and listed in Table 1. Thus, the DNA sequence of  
15 Table 1 is only a portion of the sequence included in the clone from which the sequence was derived. Thus, a clone which is isolatable from the ATCC Deposits by



use of a sequence listed in Table 1 may include the entire coding region of a human gene or in other cases such clone may include a substantial portion of the coding region of a human gene. Although the sequence listing lists only a portion of the DNA sequence in a clone included in the ATCC Deposits, it is well within the ability  
5 of one skilled in the art to complete the sequence of the DNA included in a clone isolatable from the ATCC Deposits by use of a sequence (or portion thereof) listed in Table 1 by procedures hereinafter further described, and others apparent to those skilled in the art.

The present invention also relates to the genes corresponding to SEQ ID  
10 NO:X, SEQ ID NO:Y, or the deposited clone. The corresponding gene can be isolated in accordance with known methods using the sequence information disclosed herein. Such methods include preparing probes or primers from the disclosed sequence and identifying or amplifying the corresponding gene from appropriate sources of genomic material.

15 Also provided in the present invention are allelic variants, orthologs, and/or species homologs. Procedures known in the art can be used to obtain full-length genes, allelic variants, splice variants, full-length coding portions, orthologs, and/or species homologs of genes corresponding to SEQ ID NO:X, SEQ ID NO:Y, or the deposited clone, using information from the sequences disclosed herein or the  
20 libraries deposited with the ATCC. For example, allelic variants and/or species homologs may be isolated and identified by making suitable probes or primers from the sequences provided herein and screening a suitable nucleic acid source for allelic variants and/or the desired homologue.

Table 3 summarizes the expression profile of polynucleotides corresponding  
25 to the clones disclosed in Table 1. The first column provides a unique clone identifier, "Clone ID:Z", for a cDNA clone related to each contig sequence disclosed in Table 1. Column 2, "Library Codes" shows the expression profile of tissue and/or cell line libraries which express the polynucleotides of the invention. Each Library Code in column 2 represents a tissue/cell source identifier code corresponding to the  
30 Library Code and Library description provided in Table 5. Expression of these polynucleotides was not observed in the other tissues and/or cell libraries tested. One of skill in the art could routinely use this information to identify tissues which show a

predominant expression pattern of the corresponding polynucleotide of the invention or to identify polynucleotides which show predominant and/or specific tissue expression.

Table 4, column 1, provides a nucleotide sequence identifier, "SEQ ID NO:X," that matches a nucleotide SEQ ID NO:X disclosed in Table 1, column 5. Table 4, column 2, provides the chromosomal location, "Cytologic Band or Chromosome," of polynucleotides corresponding to SEQ ID NO:X. Chromosomal location was determined by finding exact matches to EST and cDNA sequences contained in the NCBI (National Center for Biotechnology Information) UniGene database. Given a presumptive chromosomal location, disease locus association was determined by comparison with the Morbid Map, derived from Online Mendelian Inheritance in Man (Online Mendelian Inheritance in Man, OMIM™, McKusick-Nathans Institute for Genetic Medicine, Johns Hopkins University (Baltimore, MD) and National Center for Biotechnology Information, National Library of Medicine (Bethesda, MD) 2000. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>). If the putative chromosomal location of the Query overlapped with the chromosomal location of a Morbid Map entry, the OMIM reference identification number of the morbid map entry is provided in Table 4, column 3, labelled "OMIM ID." A key to the OMIM reference identification numbers is provided in Table 6.

Table 5 provides a key to the Library Code disclosed in Table 3. Column 1 provides the Library Code disclosed in Table 3, column 2. Column 2 provides a description of the tissue or cell source from which the corresponding library was derived.

Table 6 provides a key to the OMIM reference identification numbers disclosed in Table 4, column 3. OMIM reference identification numbers (Column 1) were derived from Online Mendelian Inheritance in Man (Online Mendelian Inheritance in Man, OMIM, McKusick-Nathans Institute for Genetic Medicine, Johns Hopkins University (Baltimore, MD) and National Center for Biotechnology Information, National Library of Medicine, (Bethesda, MD) 2000. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>). Column 2 provides diseases associated

with the cytologic band disclosed in Table 4, column 2, as determined using the Morbid Map database.

Table 3.

Clone ID NO: Z	Library Codes
HCENL15	H0052 H0083 H0263 H0620 L0740 L0759 L0777
HSKII86	H0031 H0056 H0090 H0159 H0250 H0264 H0268 H0341 H0422 H0423 H0518 H0521 H0528 H0575 S0032 S0046 S0132 S0134 S0280 S3014 T0041 T0042
HNHDV16	S0053
HE8BQ01	H0013 H0090 H0263 L0438 L0439 L0521 L0655 L0686 L0731 L0748 L0750 L0752 L0755 L0766 L0769 L0776 S0148 S0360
HBMCT70	H0040 H0090 H0421 L0740 L0766
HNTBM67	H0013 H0031 H0032 H0040 H0046 H0052 H0123 H0163 H0170 H0171 H0178 H0201 H0266 H0355 H0369 H0373 H0381 H0390 H0411 H0427 H0428 H0435 H0438 H0486 H0519 H0520 H0539 H0550 H0551 H0555 H0562 H0590 H0602 H0615 H0623 H0624 H0648 H0659 H0660 H0662 H0667 H0670 H0672 H0682 H0685 H0686 L0005 L0366 L0370 L0372 L0438 L0439 L0471 L0483 L0518 L0520 L0521 L0526 L0527 L0564 L0565 L0595 L0596 L0598 L0602 L0637 L0641 L0646 L0650 L0659 L0662 L0663 L0664 L0665 L0666 L0731 L0740 L0751 L0753 L0754 L0755 L0756 L0758 L0759 L0768 L0769 L0771 L0773 L0774 L0776 L0777 L0779 L0783 L0806 S0003 S0026 S0028 S0031 S0036 S0045 S0046 S0049 S0051 S0194 S0196 S0212 S0222 S0242 S0260 S0280 S0328 S0330 S0354 S0356 S0360 S0370 S0374 S0376 S0380 S0388 S0418 S0450 S6028 T0006 T0040 T0110
HDPKC15	H0521 S0134 S0300 S0360
HE2OC31	H0170 H0412 H0641 L0759 L0766 L0770 L0775 L0779 S0360
HLWAY38	H0522 H0543 H0553 H0581 L0731 L0740 L0755 L0766 L0771 L0774 L0777 L0792 L0800 L0803
HBMXT67	H0012 H0052 H0135 H0144 H0171 H0351 H0369 H0457 H0543 H0620 H0644 H0653 H0658 H0663 L0167 L0438 L0439 L0471 L0526 L0541 L0591 L0599 L0638 L0646 L0666 L0743 L0747 L0748 L0750 L0754 L0756 L0758 L0761 L0763 L0764 L0765 L0766 L0770 L0774 L0777 L0779 L0803 L0809 S0006 S0007 S0010 S0116 S0134 S0360
HCRND41	H0156 H0545 H0587 H0672 L0055 L0663 L0743 L0747 L0752 L0756 L0759 L0768 L0774 L0775 L0776 L0777 L0783 L0784 S0050 S0278 S0356 S0360 T0041
HWLQA43	H0031 S0150 S0358 S0360
HWLQI33	H0013 H0135 H0163 H0271 H0423 H0549 H0648 L0731 L0740 L0751 L0759 L0761 L0764 L0766 L0769 L0770 L0776 L0777 L0779 L0783 L0789 L0796 L0805 L0806 L0809 S0114 S0126 S0190 S0360 S6024
HSXDD55	L0438 L0439 L0608 L0758 S0036 S0356
HDQPP57	H0522 L0748
HCPAC07	H0340 H0590 H0596 H0641 L0520 L0639 L0745 L0809
HCRNF04	H0171 H0620 H0624 L0592 L0751 L0769 L0774 L0777 S0222 S0356
HMWHN4 3	H0144 H0341 L0471 L0752 L0766 L0779 S0126 T0110
HTTEL19	H0009 H0031 H0038 H0040 H0041 H0046 H0052 H0059 H0122 H0124 H0144 H0156 H0250 H0253 H0254 H0255 H0264 H0268 H0392 H0411 H0436 H0445 H0478 H0506 H0521 H0543 H0547 H0556 H0563 H0575 H0594 H0596 H0616 H0620 H0622 H0627 H0650 H0651 H0652 H0657 H0666 L0055 L0351 L0372 L0382 L0438 L0439 L0456 L0471 L0526 L0543 L0593 L0599 L0638 L0646 L0653 L0655 L0659 L0662 L0664 L0665 L0666 L0731 L0740 L0743 L0744 L0747 L0748 L0751 L0754 L0755 L0756 L0757 L0758 L0766 L0769 L0770 L0771 L0775 L0776 L0788 L0794 L0803 L0805 S0026 S0027 S0038 S0049 S0126 S0132 S0134 S0212 S0222 S0250 S0276 S0278 S0280 S0360 S0376 S0380 S0422 S0424 S0436 S0468 S6028 T0002 T0006 T0042

	T0067 T0110
HMCFS02	H0170 H0255 H0294 H0423 H0478 H0529 H0539 H0583 H0618 H0656 H0665 H0688 H0702 L0055 L0438 L0483 L0599 L0629 L0636 L0643 L0645 L0653 L0659 L0665 L0666 L0731 L0749 L0750 L0751 L0754 L0755 L0757 L0758 L0761 L0764 L0766 L0776 L0779 L0788 L0789 L0790 L0791 L0794 L0803 L0804 L0805 L0806 L0809 S0282 S0330 S0344 S0420 S0428
HDTBY31	H0004 H0014 H0015 H0032 H0039 H0040 H0052 H0156 H0251 H0266 H0268 H0318 H0328 H0356 H0361 H0369 H0373 H0375 H0413 H0427 H0428 H0445 H0486 H0488 H0506 H0519 H0520 H0546 H0551 H0553 H0555 H0575 H0586 H0587 H0590 H0591 H0594 H0597 H0598 H0601 H0615 H0622 H0623 H0624 H0631 H0642 H0643 H0644 H0651 H0662 H0665 H0667 L0163 L0438 L0439 L0471 L0517 L0519 L0527 L0565 L0581 L0598 L0638 L0654 L0659 L0731 L0740 L0745 L0747 L0748 L0749 L0751 L0754 L0757 L0758 L0769 L0773 L0776 L0777 L0779 L0804 S0003 S0004 S0013 S0027 S0028 S0031 S0037 S0040 S0045 S0046 S0126 S0146 S0174 S0192 S0196 S0208 S0210 S0212 S0214 S0250 S0342 S0356 S0360 S0376 S0390 S0402 S0418 S0438 S0104 T0067
HTXFI40	H0265 H0444 H0595 L0779 S0376
HADFW62	H0052 H0156 H0333 H0427 H0478 H0521 H0556 H0617 H0646 H0670 L0384 L0439 L0543 L0591 L0646 L0657 L0745 L0747 L0749 L0756 L0757 L0764 L0769 L0776 S0116 S0210
HARMP12	H0592
HDPCN86	H0309 H0521 S0028 S0356
HFIAX76	H0057 H0529 L0055 L0483 L0750 L0756 L0758 L0759 L0766 L0773 L0776 L0779 S0192 S0300 S0360 S0378 S0422 S0452
HAFBC92	H0445 L0740 L0751 T0049
HFIZG43	H0208 H0251 H0445 H0486 H0615 L0439 L0740 L0750 S0214 S0242 T0041
HMEBY61	H0267 T0049
HTJN176	H0263 H0435 H0486 H0488 H0520 H0579 H0662 H0687 L0438 L0527 L0645 L0656 L0751 L0753 L0766 L0771 L0779 L0783 L0809 S0192 S0300 S0376
HWLFM26	H0085 H0232 H0234 H0597 L0372 L0645 L0789 S0354 S0358 S0374 S0378 S0380 S0408 S0442
HAQBZ89	H0295 S0218
HWLEH32	S0354
HWLEL81	S0010 S0354 S0356 S0358 S0374 S0432 S0442
HTLHR67	H0013 H0037 H0052 H0187 H0251 H0416 H0509 H0518 H0538 H0543 H0549 H0551 H0617 H0618 L0362 L0643 L0666 L0717 L0720 L0731 L0748 L0752 L0754 L0755 L0774 L0775 L0777 L0779 L0789 L0804 S0003 S0010 S0049 S0116 S0280 S0356 S0360 T0067
HTSGO78	H0039 H0040 H0087 H0131 H0194 H0592 S0001
HCBBA51	H0009 H0013 H0023 H0031 H0039 H0040 H0042 H0044 H0046 H0052 H0087 H0100 H0125 H0134 H0136 H0144 H0150 H0163 H0170 H0171 H0173 H0177 H0201 H0204 H0231 H0238 H0255 H0294 H0306 H0309 H0341 H0373 H0393 H0408 H0411 H0412 H0413 H0421 H0422 H0423 H0428 H0441 H0445 H0486 H0494 H0546 H0576 H0581 H0586 H0595 H0596 H0597 H0598 H0599 H0606 H0609 H0616 H0617 H0622 H0633 H0634 H0635 H0646 H0648 H0651 H0653 H0657 H0658 H0659 H0661 H0663 H0664 H0669 H0670 H0672 H0674 H0682 H0685 H0686 H0690 L0005 L0163 L0373 L0375 L0394 L0500 L0519 L0520 L0521 L0522 L0526 L0542 L0588 L0598 L0622 L0623 L0637 L0653 L0731 L0747 L0750 L0751 L0755 L0757 L0758 L0759 L0761 L0762 L0763 L0764 L0767 L0768 L0769 L0772 L0773 L0774 L0775 L0782 L0783 L0789 L0803 L0808 L0809 S0003 S0007 S0011 S0026 S0027 S0031 S0032 S0045 S0046 S0048 S0051 S0053 S0116 S0126 S0132 S0134 S0142 S0144 S0152 S0188 S0194 S0222 S0260 S0278 S0280 S0282 S0328 S0330 S0344 S0358 S0360 S0366 S0374 S0376 S0378 S0380 S0388 S0394 S0422 S0428 S6022 S6024 T0002 T0006 T0023 T0039 T0041 T0048 T0049 T0069 T0109

HNTCW73	H0038 H0040 H0052 H0125 H0144 H0194 H0252 H0288 H0359 H0494 H0519 H0547 H0551 H0657 L0483 S0026 S0027 S0028 S0045 S0046 S0152 S0206 S0342 S0346 T0103
HLYG06	H0181 H0444 H0445 H0596 H0657 H0670 L0373 L0439 L0499 L0500 L0502 L0504 L0505 L0506 L0507 L0508 L0509 L0511 L0540 L0659 L0663 L0740 L0748 L0750 L0752 L0754 L0758 L0763 L0764 L0768 L0769 L0777 L0779 L0783
HAPOA59	H0013 H0038 H0040 H0050 H0056 H0057 H0059 H0144 H0169 H0264 H0266 H0318 H0341 H0428 H0509 H0519 H0529 H0539 H0544 H0556 H0560 H0572 H0574 H0575 H0591 H0615 H0616 H0619 H0646 H0648 H0649 H0663 L0096 L0375 L0378 L0438 L0439 L0471 L0520 L0558 L0588 L0589 L0592 L0593 L0595 L0601 L0637 L0655 L0659 L0664 L0666 L0731 L0740 L0747 L0748 L0749 L0752 L0753 L0754 L0756 L0757 L0758 L0759 L0764 L0766 L0768 L0769 L0770 L0771 L0774 L0775 L0776 L0779 L0780 L0783 L0789 L0794 L0803 L0804 L0805 L0809 S0014 S0036 S0040 S0132 S0144 S0152 S0250 S0328 S0356 S0392 S0418 S0420 S0422 S6016 S6024 S6028 T0041 T0067 T0109 T0110
HKLRB18	H0002 H0013 H0014 H0036 H0046 H0050 H0144 H0163 H0234 H0251 H0266 H0411 H0412 H0413 H0427 H0545 H0550 H0551 H0586 H0593 H0599 H0615 H0672 L0005 L0163 L0366 L0471 L0542 L0591 L0599 L0659 L0731 L0748 L0750 L0756 L0757 L0758 L0759 L0777 L0783 L0803 S0026 S0027 S0045 S0152 S0192 S0206 S0212 S0276 S0328 S0356 S0360 S0418 S3014 T0040
HKAJZ24	H0263 H0494 S0354 S0358 T0039
HJPAU37	H0083 H0097 H0253 H0494 H0556 H0560 H0580 H0593 H0657 L0754 L0766 L0777 S0356
HHGCU20	H0039 H0052 H0087 H0125 H0135 H0144 H0253 H0318 H0333 H0380 H0445 H0494 H0542 H0556 H0617 H0624 H0657 H0661 L0471 L0520 L0526 L0622 L0623 L0731 L0747 L0748 L0749 L0758 L0759 L0764 L0766 L0769 L0774 L0779 L0806 L0809 S0144 S0210 S0222 S0344 S0360 S0420 S3012 S6022 T0008 T0049 T0082 T0115
HHEDO80	H0014 H0015 H0156 H0263 H0318 H0411 H0412 H0436 H0445 H0455 H0497 H0521 H0529 H0542 H0543 H0574 H0575 H0581 H0596 H0599 H0657 H0659 L0005 L0021 L0455 L0517 L0589 L0590 L0591 L0639 L0664 L0731 L0740 L0741 L0747 L0752 L0755 L0759 L0766 L0769 L0773 L0775 L0776 L0777 L0780 L0794 L0809 S0003 S0132 S0342 S0360 S0374 S0378 S6024
HFIHX78	H0031 H0036 H0051 H0250 H0251 H0263 H0393 H0427 H0436 H0486 H0520 H0575 H0580 H0592 H0596 H0598 H0635 H0661 H0662 L0065 L0373 L0439 L0666 L0731 L0748 L0752 L0774 L0783 S0194 S0358 S0360 T0023 T0067
HTXOJ32	H0013 H0052 H0056 H0087 H0100 H0150 H0212 H0255 H0352 H0369 H0408 H0486 H0556 H0595 H0599 H0619 H0652 H0670 L0352 L0369 L0381 L0415 L0438 L0439 L0518 L0519 L0528 L0530 L0543 L0588 L0591 L0596 L0605 L0629 L0646 L0659 L0731 L0741 L0747 L0751 L0757 L0758 L0761 L0764 L0768 L0769 L0771 L0773 L0774 L0809 S0003 S0031 S0038 S0045 S0106 S0126 S0134 S0222 S0242 S0250 S0314 S0354 S0356 S0360 S0376 T0010 T0041
HE6FT69	H0100 L0601
HFIHN81	H0012 H0046 H0050 H0051 H0052 H0059 H0090 H0098 H0144 H0170 H0264 H0309 H0328 H0356 H0370 H0412 H0427 H0428 H0459 H0509 H0521 H0546 H0547 H0562 H0575 H0591 H0596 H0598 H0616 H0624 H0628 H0634 H0648 H0658 H0659 H0670 H0672 H0684 L0021 L0157 L0362 L0439 L0444 L0485 L0518 L0523 L0599 L0600 L0646 L0657 L0659 L0662 L0663 L0664 L0665 L0717 L0731 L0738 L0745 L0750 L0751 L0752 L0754 L0756 L0758 L0759 L0766 L0768 L0770 L0774 L0776 L0777 L0779 L0783 S0003 S0026 S0126 S0194 S0212 S0214 S0222 S0242 S0260 S0328 S0330 S0354 S0356 S0360 S0376 S0378 S0426 S0464 S6028 T0006 T0067
HWACZ95	H0012 H0144 H0370 H0393 H0485 H0521 H0574 H0581 H0615 H0620 H0635 L0381 L0591 L0608 L0648 L0743 L0766 L0774 S0356 S0376
HOELH62	H0040 H0069 H0083 H0090 H0100 H0123 H0144 H0187 H0266 H0333 H0341 H0370 H0402 H0411 H0413 H0441 H0510 H0525 H0530 H0543 H0544 H0545

	H0546 H0580 H0634 L0361 L0375 L0588 L0740 L0747 L0748 L0752 L0767 S0026 S0040 S0045 S0112 S0114 S0116 S0126 S0182 S0196 S0354 S0358 S0374 S0404 S0462 S3012
HCE3J64	H0052 H0333 L0439 L0636 L0637 L0742 L0759 S0376 S0388
HWHGE39	H0038 H0051 H0136 H0144 H0178 H0222 H0235 H0305 H0341 H0373 H0393 H0428 H0435 H0441 H0494 H0506 H0519 H0520 H0542 H0543 H0547 H0555 H0586 H0587 H0624 H0646 H0648 H0650 H0657 H0667 H0670 H0684 L0021 L0352 L0438 L0439 L0517 L0586 L0592 L0662 L0664 L0666 L0731 L0740 L0744 L0747 L0748 L0749 L0752 L0755 L0756 L0757 L0758 L0759 L0766 L0768 L0773 L0776 L0777 L0779 L0784 L0804 L0809 S0002 S0007 S0010 S0036 S0132 S0192 S0328 S0356 S0358 S0376 S0424 S0460 T0010 T0115
HNGIN84	H0014 H0036 H0039 H0085 H0183 H0204 H0231 H0506 H0509 H0590 H0596 H0597 H0622 L0021 L0040 L0364 L0365 L0372 L0373 L0374 L0509 L0596 L0599 L0646 L0659 L0662 L0761 L0764 L0765 L0772 L0775 L0789 S0052 S0354 S0356 S0358 S0360 S0374 S0376 S0378 S0380 S0408 S0440 S0442 T0008 T0023 T0109
HPJCI42	H0309 H0370 H0550 H0622 H0624 H0632 H0634 L0005 L0662 L0666 L0764 L0769 L0775 L0776 L0794 S0036 S0152
HWLOF51	H0013 H0040 H0318 S0376
HLDOCK36	H0012 H0013 H0014 H0015 H0024 H0038 H0039 H0045 H0046 H0051 H0056 H0059 H0063 H0069 H0074 H0083 H0087 H0090 H0123 H0130 H0135 H0156 H0163 H0166 H0188 H0213 H0222 H0250 H0261 H0264 H0265 H0266 H0271 H0294 H0295 H0309 H0316 H0333 H0341 H0351 H0370 H0390 H0393 H0411 H0416 H0421 H0422 H0423 H0424 H0427 H0428 H0431 H0435 H0436 H0441 H0444 H0445 H0457 H0478 H0484 H0486 H0494 H0497 H0510 H0519 H0520 H0521 H0522 H0530 H0539 H0543 H0545 H0546 H0547 H0549 H0551 H0556 H0574 H0575 H0576 H0580 H0581 H0584 H0585 H0587 H0594 H0595 H0597 H0598 H0613 H0617 H0618 H0624 H0625 H0633 H0634 H0635 H0638 H0646 H0648 H0649 H0650 H0652 H0659 H0661 H0662 H0665 H0668 H0672 H0684 H0695 H0702 L0021 L0361 L0363 L0368 L0369 L0439 L0471 L0517 L0588 L0595 L0596 L0598 L0637 L0638 L0640 L0649 L0651 L0655 L0659 L0662 L0663 L0665 L0666 L0667 L0731 L0740 L0743 L0747 L0748 L0749 L0750 L0751 L0752 L0753 L0754 L0755 L0756 L0757 L0759 L0761 L0762 L0764 L0766 L0768 L0769 L0770 L0772 L0774 L0775 L0776 L0777 L0779 L0780 L0782 L0783 L0785 L0787 L0789 L0794 L0796 L0800 L0803 L0805 S0002 S0003 S0007 S0011 S0026 S0028 S0031 S0032 S0036 S0040 S0045 S0046 S0049 S0050 S0052 S0114 S0116 S0126 S0132 S0142 S0144 S0150 S0192 S0194 S0206 S0210 S0212 S0214 S0218 S0222 S0276 S0278 S0280 S0306 S0320 S0322 S0330 S0344 S0348 S0350 S0354 S0356 S0358 S0360 S0372 S0374 S0376 S0378 S0380 S0382 S0384 S0388 S0392 S0422 S0424 S0426 S0432 S0448 S0450 S0460 S0472 S0474 S3012 S3014 S6022 T0002 T0003 T0006 T0039 T0042 T0048 T0049 T0109
HSDJF12	H0014 H0031 H0036 H0038 H0085 H0204 H0231 H0263 H0383 H0478 H0487 H0587 H0590 H0593 H0594 H0596 H0597 H0618 H0619 H0658 H0688 L0040 L0372 L0374 L0601 L0603 L0645 L0653 L0658 L0659 L0662 L0665 L0666 L0743 L0748 L0758 L0761 L0764 L0768 L0769 L0770 L0771 L0775 L0780 L0789 L0794 L0800 L0803 L0804 L0809 S0260 S0280 S0354 S0358 S0374 S0408 S0442 S0458
HWLFF02	H0036 H0056 H0085 H0170 H0171 H0231 H0232 H0263 H0506 H0521 H0590 H0597 L0040 L0627 L0764 L0765 S0354 S0356 S0358 S0374 S0376
HEMFI21	H0013 H0031 H0046 H0050 H0156 H0212 H0266 H0427 H0509 H0551 H0553 H0574 H0616 L0455 L0462 L0596 L0747 L0759 S0003 S0046 S0174 S0376
HELGG49	H0030 H0051 H0052 H0135 H0455 H0478 H0617 H0648 H0657 L0375 L0591 L0596 L0657 L0663 L0665 L0666 L0740 L0743 L0747 L0748 L0752 L0754 L0757 L0800 S0045 S0046 S0222 S0356 S0376 S0426 S0458 T0067
HRABQ68	H0014 H0052 H0266 H0327 H0370 H0422 H0445 H0519 H0543 H0546 H0555 H0556 H0615 H0618 L0055 L0438 L0439 L0456 L0598 L0622 L0731 L0740 L0744 L0745 L0747 L0748 L0750 L0752 L0754 L0755 L0758 L0759 L0761 L0764 L0769 L0770 L0774 L0776 L0779 L0800 L0803 S0045 S0144 S0356 S0358 S6028 T0071

HCRMP14	S0356
HPRAO21	H0004 H0012 H0024 H0031 H0032 H0156 H0169 H0370 H0428 H0435 H0478 H0520 H0521 H0596 H0597 H0598 H0644 H0648 H0658 H0664 H0672 H0675 H0682 L0041 L0471 L0483 L0598 L0599 L0605 L0648 L0657 L0659 L0662 L0663 L0665 L0666 L0717 L0740 L0744 L0747 L0748 L0749 L0750 L0752 L0754 L0755 L0758 L0763 L0764 L0768 L0770 L0771 L0774 L0775 L0776 L0779 L0783 L0805 L0806 L0809 S0328 S0330 S0354 S0358 S0360 S0374 S0376 S0378 S0392 S0448 T0023 T0079
HAIBU93	H0008 H0012 H0024 H0030 H0031 H0038 H0052 H0068 H0087 H0107 H0135 H0144 H0178 H0181 H0182 H0194 H0231 H0265 H0266 H0271 H0318 H0320 H0327 H0351 H0369 H0392 H0412 H0416 H0422 H0423 H0445 H0486 H0494 H0518 H0519 H0521 H0539 H0542 H0543 H0555 H0556 H0561 H0591 H0597 H0599 H0606 H0616 H0617 H0620 H0634 H0644 H0646 H0658 H0659 H0663 H0664 H0673 H0677 H0682 H0684 L0021 L0351 L0352 L0369 L0371 L0372 L0438 L0439 L0455 L0471 L0517 L0596 L0599 L0623 L0640 L0646 L0648 L0655 L0656 L0659 L0662 L0664 L0666 L0667 L0717 L0731 L0738 L0744 L0745 L0747 L0748 L0749 L0751 L0755 L0756 L0757 L0758 L0759 L0761 L0764 L0766 L0768 L0769 L0770 L0774 L0775 L0776 L0777 L0779 L0788 L0794 S0002 S0038 S0046 S0049 S0132 S0134 S0142 S0152 S0222 S0280 S0344 S0356 S0358 S0360 S0374 S0376 S0380 S0388 S0404 S0420 S0428 S6028 T0048 T0068
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Table 4

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		276902 601199 601682
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309	14	
312	1q32-q41	114208 119300 120620 120920 134370 134580 145260 150310 179820 191045 276901 600105 600332 600759 601494 601744 601975
315	Xq21.3-q22	300088 300300 301201 301500 301835 303400 303630 303631 304500 304700 305450 309300 309605 311850 312080
318	Xp22.32	306250 308100 312865
328	10p13	601362
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335	16q24	102600 103850 233690
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347	4p	
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354	2p25	274500 602134
357	20q11.1-11.23	139190 224100 601002 601146
358	7q34-q35	118425 152427 180105 222800 274180 276000 600510
359	5q23-q31	121050 126150 131400 138040 153455 159000 179095 181460 192974 600807 601596 601692 602089 602121 602460
365	2cen-q24	
367	17q25	114290 138033 162100 170500 180860 264470
368	12q21.3-q22	147440 201470 235800 273300
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381	20q11.2-q12	139190 224100 600281 601002 601146
384	7q22.1	120160 126650
386	17p13	138190 254210 271900 600179 600977 601202 601777
392	19p13.2	108725 120700 133171 143890 147670 151440 164953 231670 600276 600957 601843



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749	4q28-q32	107250 134820 134830 134850 181600 189800 208400 231675 266300 600983
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844	11p15.5	125852 126452 141900 142000 142200 142250 142270 176730 190020 191290 192500 194071 204500 600856 601680 602631
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881	1q41-q42	106150 145260 173870 276901 600332 600759 600996 601744 601975
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905	21q22.3	120220 120240 123580 151385 171860 190685 236100 236200 240300 267750 600065 601072 601145
914	17p13.3	113721 247200 600059 601545
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1428	13q32-q33	133530 156600 232000 256731 601295 602085
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1580	21q11.2	159595
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1691	7q31.2	150240 180105 222800 246900 602421
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1703	11q23.3	176000 261640 602574
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1733	16p13.3	141750 141800 141850 156850 186580 191092 600140 600273 601313 601785
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1911	6p12	180297 230450 263200 601690
1916	5p14-p13	108962 120940 217050 217070 245050 600837 600946
1935	11q13	102200 106100 131100 133780 147050 153700 161015 164009 168461 180721 180840 191181 193235 209901 232600 259700 259770 600045 600319 600528 601884
1940	1	
1944	22	



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1961	1p22-p31	170995 180069 191540 201450 248610 274270 600309 601414 601676 602094 602522
1971	1q21.2-q22	104770 107670 110700 145001 146760 146790 159440 186780 191030 191315 600923 601412 601652 601863 602491
1973	16q13-q21	114835 118470 132700 172490 209900 600968
1975	5q35.3	
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1983	15q	
1984	6p12	180297 230450 263200 601690
1986	17p13	138190 254210 271900 600179 600977 601202 601777
1989	12q24.31	181405
1993	6p21.3	106300 108800 120290 120810 120820 142857 142858 150270 167250 170261 177900 179450 201910 217000 222100 233100 235200 248611 256550 600202 600261 601868 602280 602475
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1995	1p33	120260 138140 178300 246450
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2008	17	
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2015	1q32	114208 119300 120620 120920 134370 134580 145260 150310 179820 191045 600105 600759 601494 601975
2018	Xq22	300088 300300 301201 301500 301835 303630 303631 304500 304700 309300 309605 311850 312080
2020	22q13.2-q13.31	188826 250100 250800
2021	5q33-q34	109690 123101 131400 154500 164770 180071 181460 222600 234000 272750 600584 600807 601411 601596 602089
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2024	5q14-q21	143200 159350 162150 175100
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2064	9q33-q34	125270 128100 137350 146150 191100 215700 223360 223900 253800 268900 601850
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2113	11q21-q22	105580 133780 203100 602574
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2145	15q21-q22.2	102578 105600 107910 109700 114240 134797 151670 154550 160777 191010 600839 601780 602099
2149	4p	
2153	12q	
2158	16q22	103850 114835 121360 217800 218030
2163	22q12.2	101000 123620 138981 188826 600850 601669
2180	19q12-q13.1	109560 164731 172400 180901 205900 221770 248600 600652 600757 600918 602716
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2189	12	
2193	6q14	136550 203310 269920 602772
2197	12q24.3	160781 181405
2199	8q13.3	214400 600415 601653 602476
2200	7q13-q22	116860 126650 129900 133170 154276 171050 171060 173360 183600 253220 602136 602447
2201	1q25	107300 131210 136132 145001 150292 173610 208250 233710 600995 601518 601652
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2215	12q13-q15	107777 120140 123829 123940 126337 139350 147570 148040 148041 148043 148070 181430 231550 232800 252940 264700 600194 600231 600536 600698 600808 600956 601284 601769 601928 602116 602153
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2232	12q23	124200 147440 160781 235800 600175
2239	16p13.3	141750 141800 141850 156850 186580 191092 600140 600273 601313 601785
2240	20p11.2	121700 122000 188040
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2268	2p22-p21	120435 126600 135300 136435 152790 157170 182601 278300 601071 601771 602134
2270	22q13.33	
2271	22q13.31	250100 250800
2272	22q13.1	103050 124030 138981 182380 188826 190040
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2281	5p14-p13	108962 120940 217050 217070 245050 600837 600946
2283	17q21	109270 113705 144200 148065 148066 148067 148069 148080 154275 168610 171190 176705 185800 200350 221820 232200 249000 252920 253250 600119 601363 601844
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2287	9q33-q34	125270 128100 137350 146150 191100 215700 223360 223900 253800 268900 601850
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2290	16q22	103850 114835 121360 217800 218030
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2292	2q31	100690 120180 120190 142989 156232 178600 266100 600258 600321
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2294	22q13.2-q13.31	188826 250100 250800
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		164009 168461 180721 180840 191181 193235 209901 232600 259700 259770 600045 600319 600528 601884
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2306	17p13.3	113721 247200 600059 601545
2307	10	
2308	17p13.3	113721 247200 600059 601545
2310	15q21-q22.2	102578 105600 107910 109700 114240 134797 151670 154550 160777 191010 600839 601780 602099
2312	11q13	102200 106100 131100 133780 147050 153700 161015 164009 168461 180721 180840 191181 193235 209901 232600 259700 259770 600045 600319 600528 601884
2392	8q11	600899
2403	8q21	124080 202010 214400 602476 602667
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2416	11	
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2420	17p13.3	113721 247200 600059 601545
2421	17p13.3	113721 247200 600059 601545
2422	17p13.3	113721 247200 600059 601545
2424	1p34.1-p32	120260 120550 120570 120575 120950 120960 121800 130500 133200 138140 168360 171760 176100 178300 187040 230000 246450 255800 600101 600650 600722
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		159001 174000 179755 182860 191315 230800 266200 600897 601105 601412 601652 602491
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2438	4p16.3	134934 143100 180072 194190 252800 600965
2439	6p21.3	106300 108800 120290 120810 120820 142857 142858 150270 167250 170261 177900 179450 201910 217000 222100 233100 235200 248611 256550 600202 600261 601868 602280 602475
2440	6q22-q23	107470 120110 121014 142470 156225 164200 207800 601316 601410 601757 602067
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2443	12	
2445	19pter-q12	
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2447	2q12-q21	129490 133510 165320 167415 176860 176947 223000 256100
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2449	4q	
2450	7p	
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2453	2q23	
2454	9cen-q34	
2456	14q24.1	182600
2457	9q12	602014
2463	20q13.2-q13.3	118504 131242 139320 602025 602235
2466	1q21.2-q22	104770 107670 110700 145001 146760 146790 159440 186780 191030 191315 600923 601412 601652 601863 602491
2467	4q31	107250 181600 189800 266300
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2476	7q34	180105 222800 274180
2477	6q14	136550 203310 269920 602772
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2485	2p12	147200 178640 216900
2486	2p12	147200 178640 216900
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		300126 301201 301590 302060 302960 303700 303800 303900 304800 305900 306700 306995 308310 308840 309200 309548 309620 309900 310300 310400 310460 311300 311510 314300 314400
2561	1q21.2-q22	104770 107670 110700 145001 146760 146790 159440 186780 191030 191315 600923 601412 601652 601863 602491
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2614	12q	
2615	14q	
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2617	19q12-q13.1	109560 164731 172400 180901 205900 221770 248600 600652 600757 600918 602716
2619	22q13.1	103050 124030 138981 182380 188826 190040
2620	4p16	225500 600593 602363
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2627	1q31-q32	114208 119300 120620 120920 134370 134580 145001 145260 150292 150310 179820 191045 208250 226450 600105 600759 600995 601494 601652 601975
2628	11p15.5-p15.4	125852 126452 130650 141900 142000 142200 142250 142270 150000 176730 190020 191290 192500 194071 204500 257200 600856 601680 602631
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2633	8q22-q23	148900 216550 259730
2634	12q12	600194 600231 601284 601769
2635	2p22-p21	120435 126600 135300 136435 152790 157170 182601 278300 601071 601771 602134
2636	7q21.1	129900 154276 171050 171060 602136 602447
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2652	12q13.1	126337 600808 601284 601769 602116
2655	13q14	109543 600631 601499
2656	20p13	192340 234200
2657	16p13.3	141750 141800 141850 156850 186580 191092 600140 600273 601313 601785
2659	19p13.1-p12	143890 151440 600173 600276 600310 601011 601604



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2742	6p21.3	106300 108800 120290 120810 120820 142857 142858 150270 167250 170261 177900 179450 201910 217000 222100 233100 235200 248611 256550 600202 600261 601868 602280 602475
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2942	14q11.2	182600 186880 190195 222700 600243 602279
2979	12q13	107777 123940 139350 148040 148041 148043 148070 231550 600194 600231 600536 600808 600956 601284 601769 601928 602116 602153
3024	12p13	103950 120580 131440 139130 142680 176260 190450 200990 216950 600228 600414 600618 602096
3070	5q31.1	131400 147061 147575 153455 159000 181460 600807 601596 602089
3079	6q14	136550 203310 269920 602772
3080	6q14	136550 203310 269920 602772
3082	7	
3117	1p36	118210 120550 120570 120575 121800 130500 133200 155600 171760 185470 211420 230350 255800 601990 602023 602771
3130	9p21	108120 112250 247640 600160 600221 601606
3133	11q25	602782
3154	12q24.1	124200 147440 160781 181405 261600 601406 601620 601621
3177	Xp22.32	306250 308100 312865
3178	4q34-q35	158900 189800 229000 264900

3183	11q13	102200 106100 131100 133780 147050 153700 161015 164009 168461 180721 180840 191181 193235 209901 232600 259700 259770 600045 600319 600528 601884
3187	13q14	109543 600631 601499
3205	17p13.3	113721 247200 600059 601545
3226	5q14-q22	143200 159350 162150 175100
3236	11q13	102200 106100 131100 133780 147050 153700 161015 164009 168461 180721 180840 191181 193235 209901 232600 259700 259770 600045 600319 600528 601884
3243	17q21	109270 113705 144200 148065 148066 148067 148069 148080 154275 168610 171190 176705 185800 200350 221820 232200 249000 252920 253250 600119 601363 601844
3259	13q14	109543 600631 601499
3281	14q24-q31	104311 107970 109150 115650 182600 245200 275200 601208 602091
3287	19q13.3	113900 126340 126391 130410 134790 138570 160900 173850 258501 600040 602225
3299	12q13-q14	107777 120140 123829 123940 126337 139350 147570 148040 148041 148043 148070 181430 231550 232800 252940 264700 600194 600231 600536 600808 600956 601284 601769 601928 602116 602153
3306	2p25	274500 602134
3316	2	
3323	22q13.2-q13.31	188826 250100 250800
3329	21q22.1	147450 176261 253270 601399
3335	15q15.3	114240 224120 600839 602099
3351	12q12-q13	107777 123940 139350 148040 148041 148043 148070 231550 600194 600231 600536 600808 600956 601284 601769 601928 602116 602153
3357	9q11-q22	190100 200150 229300 229600 264300 600429 600542 600884 600974 600998 602014 602088
3382	16q22.1	103850 114835 116800 140100 192090 245900 276600 600223
3392	19q13.4	134790 191044 600040 600138
3411	5q13	126060 143200 181510 253200 268800 600354
3429	9q22.3	162400 227645 229700 278700 601309 602088
3434	6p21	180297 248611 251000 263200 600211 600701 601690
3439	15q15	177070 182500 218000 227220 243500 600839 601800
3442	20q12	600281
3445	12	
3451	2q31	100690 120180 120190 142989 156232 178600 266100 600258 600321
3455	16q22	103850 114835 121360 217800 218030
3460	11q12	106100 147050 259700 259770 600045 601884
3465	11q13-q14	102200 106100 131100 133780 147050 151400 153700 161015 164009 168461 180721 180840 191181 193235 203100 209901 232600 245000 259700 259770 266150 276903 600045 600319 600528 601650 601884 602078
3477	1q12-1q21.2	104770 107670 110700 135940 145001 146760 146790

		152445 159001 174000 179755 182860 191315 230800 266200 600897 601105 601412 601652 601863 602491
3492	16q22.1	103850 114835 116800 140100 192090 245900 276600 600223
3497	17q25	114290 138033 162100 170500 180860 264470
3503	1p31-p12	102770 120280 164790 166600 170995 180069 188540 191540 201450 201810 232400 248610 274270 600234 600309 601414 601676 601691 601718 602094 602522
3526	20	
3532	5q23-31	121050 126150 131400 138040 153455 159000 179095 181460 192974 600807 601596 601692 602089 602121 602460
3544	2p25.2-p25.1	
3549	12q24	113100 124200 147440 158590 160781 163950 251170 276710 600175 601517
3551	12q13	107777 123940 139350 148040 148041 148043 148070 231550 600194 600231 600536 600808 600956 601284 601769 601928 602116 602153
3555	1p31	180069 201450 248610 600309 601676 602522
3559	5q33-q34	109690 123101 131400 154500 164770 180071 181460 222600 234000 272750 600584 600807 601411 601596 602089
3560	3q13.1-q13.2	600467 600882
3561	19q12	
3564	21q22.3	120220 120240 123580 151385 171860 190685 236100 236200 240300 267750 600065 601072 601145
3566	16q12-q13	114835 132700 172490 600968 602218 602639
3567	16q24.3	155555 227650 253000 602783
3573	1q32	114208 119300 120620 120920 134370 134580 145260 150310 179820 191045 600105 600759 601494 601975
3574	10q21.1	129010 601386 601493
3576	19	
3600	19q13.3-q13.4	113900 126340 126391 130410 134790 138570 152780 160900 173850 191044 258501 600040 600138 602225
3607	12q13	107777 123940 139350 148040 148041 148043 148070 231550 600194 600231 600536 600808 600956 601284 601769 601928 602116 602153
3608	1p33-p34	120260 130500 133200 138140 168360 171760 176100 178300 230000 246450 255800
3611	2	
3623	17q25	114290 138033 162100 170500 180860 264470
3636	7q11	
3646	3p21.3	116806 120120 120436 138320 168468 182280 600163
3647	11q13	102200 106100 131100 133780 147050 153700 161015 164009 168461 180721 180840 191181 193235 209901 232600 259700 259770 600045 600319 600528 601884
3650	Xp22.1	300075 300077 301200 302350 306000 306100 307800 309510 311770 312040 312170 312700 313400
3652	5q22-q23	121050 126150 159000 175100 179095 192974 601596
3653	1q44-qter	

3659	19q13.1	164731 172400 180901 221770 248600 600918 602716
3671	7p21-p15	138079 139191 142959 153880 180104 600994 601622 601649
3683	15q26	180090 600318
3688	10q11.2	154545 164761 188550
3690	12q24.31	181405
3691	6q14	136550 203310 269920 602772
3701	15q21-q22.2	102578 105600 107910 109700 114240 134797 151670 154550 160777 191010 600839 601780 602099
3702	1	
3703	Xq24	300046 300123 301201 301835 301845 307150 310490 311850
3704	8q21.3-q22.1	216550 222745 259730
3705	2q31	100690 120180 120190 142989 156232 178600 266100 600258 600321
3706	22q13.31	250100 250800
3707	3q12-q13	121300 146200 190300 258900 600882
3711	12q22-q23	124200 147440 160781 201470 235800 273300 600175
3712	15q21-q22.2	102578 105600 107910 109700 114240 134797 151670 154550 160777 191010 600839 601780 602099
3729	8q	
3749	19q13.1-q13.2	107741 113900 122720 126340 126391 160900 164731 172400 173850 180901 207750 221770 248600 258501 600918 602716
3773	12q24.2	100650 142410 160781 181405
3782	3p21	139330 139360 150250 164500 182280 600163 600971 601226 601267 601373
3784	5q13.3-q14	139150 143200 181510 600354
3800	4q13-q21	103600 104150 104500 125490 147790 170650 173910 252500
3803	6q14	136550 203310 269920 602772
3831	3q26	165215 222900 600049
3838	10p11.2	600964 602026
3854	1p21	102770 120280 166600 170995 232400 600309 601414 601691 601718 602094
3863	18q21.1	174810 600624 600993 602080
3864	6q	
3871	19p13.3-p13.2	108725 120700 133171 136836 143890 145981 147141 147670 151440 164953 188070 231670 600276 600957 601238 601843 601846 602216 602477
3877	2p21.3-p21.1	120435 182601 601771
3879	19q13.1-q13.2	107741 113900 122720 126340 126391 160900 164731 172400 173850 180901 207750 221770 248600 258501 600918 602716
3887	4q21-q25	103720 104500 125490 137600 138850 147790 157147 163890 173910 189800 217030 248510 252500 600919 601542
3888	1q21-q23	104770 107300 107670 110700 131210 134638 135940 136132 145001 146740 146760 146790 152445 159001 159440 173610 174000 176310 179755 182860 186780

		191030 191315 227400 230800 266200 600897 600923 601105 601412 601652 601863 602491
3908	15q22.3-q23	118485 151670 231680 272800 276700 600374 601780
3911	1q42.1	106150 136850 214500 600996 601975
3917	13	
3918	17q24.3-q25.1	114290 138033 162100 170500 180860 264470
3919	11q14.1-q14.3	133780 203100
3923	1pter-p35	
3926	10q22	126090 129010 142600 250850 601386 601493
3930	17p13.3	113721 247200 600059 601545
3971	4q	
3977	15q15	177070 182500 218000 227220 243500 600839 601800
3993	19p13.3	108725 120700 133171 136836 145981 147141 164953 188070 600957 601238 601846 602216 602477
4001	Xq26.1-q27.2	300085 300123 300700 301201 301590 301845 301900 304340 306900 306955 307150 307700 308000 309000 310490 313850
4003	17p13.3	113721 247200 600059 601545
4008	12p13	103950 120580 131440 139130 142680 176260 190450 200990 216950 600228 600414 600618 602096
4011	16q22.1	103850 114835 116800 140100 192090 245900 276600 600223
4013	10	
4018	16q22.1	103850 114835 116800 140100 192090 245900 276600 600223
4029	6q21-q22	120110 121014 156225 164200 601410 601666 601757 602772
4047	1p32-p31	120950 120960 138140 178300 180069 187040 201450 248610 600101 600309 600650 600722 601676 602522
4054	11q23	107680 107720 133780 147791 159555 168000 186740 186830 188025 203750 261640 600048 601382 602574
4058	12q22-qter	
4061	5q31.3-q32	109690 131400 138491 154500 159000 180071 181460 222600 272750 600807 601596 602089
4085	16q22.1	103850 114835 116800 140100 192090 245900 276600 600223
4093	19q13.4	134790 191044 600040 600138
4100	10q25	167409 278000 600020 600095 602669
4105	17q21	109270 113705 144200 148065 148066 148067 148069 148080 154275 168610 171190 176705 185800 200350 221820 232200 249000 252920 253250 600119 601363 601844
4125	4q21	104500 125490 147790 173910 252500
4128	17p13	138190 254210 271900 600179 600977 601202 601777
4143	19q13.2	107741 113900 122720 126340 126391 160900 164731 173850 207750 248600 258501
4149	4q27	147680 189800 600919
4171	11p15.4	130650 150000 257200
4178	12q22-q23	124200 147440 160781 201470 235800 273300 600175
4185	13q33	133530 601295

4192	1q31	134580 145001 145260 150292 208250 226450 600105 600759 600995 601652
4196	8q24.3	188450
4245	2p12	147200 178640 216900
4261	12p13	103950 120580 131440 139130 142680 176260 190450 200990 216950 600228 600414 600618 602096
4262	12q13-q15	107777 120140 123829 123940 126337 139350 147570 148040 148041 148043 148070 181430 231550 232800 252940 264700 600194 600231 600536 600698 600808 600956 601284 601769 601928 602116 602153
4263	11q22.2-q22.3	133780 203750 208900 261640 602574
4270	1q21.2-q22	104770 107670 110700 145001 146760 146790 159440 186780 191030 191315 600923 601412 601652 601863 602491

Table 5

Library Code	Library Description
	Morton Fetal
H0002	Human Adult Heart
H0004	Human Adult Spleen
H0007	Human Cerebellum
H0008	Whole 6 Week Old Embryo
H0009	Human Fetal Brain
H0011	Human Fetal Kidney
H0012	Human Fetal Kidney
H0013	Human 8 Week Whole Embryo
H0014	Human Gall Bladder
H0015	Human Gall Bladder, fraction II
H0019	Human Fetal Heart
H0022	Jurkat Cells
H0023	Human fetal lung
H0024	Human Fetal Lung III
H0026	Namalwa Cells
H0030	Human Placenta
H0031	Human Placenta
H0032	Human Prostate
H0036	Human Adult Small Intestine
H0037	Human Adult Small Intestine
H0038	Human Testes
H0039	Human Pancreas Tumor
H0040	Human Testes Tumor
H0041	Human Fetal Bone
H0042	Human Adult Pulmonary
H0044	Human Cornea
H0045	Human Esophagus, Cancer
H0046	Human Endometrial Tumor
H0048	Human Pineal Gland
H0050	Human Fetal Heart
H0051	Human Hippocampus
H0052	Human Cerebellum
H0056	Human Umbilical Vein, Endo. remake
H0057	Human Fetal Spleen
H0059	Human Uterine Cancer
H0063	Human Thymus
H0068	Human Skin Tumor
H0069	Human Activated T-Cells
H0071	Human Infant Adrenal Gland
H0074	Human Platelets
H0081	Human Fetal Epithelium (Skin)
H0083	HUMAN JURKAT MEMBRANE BOUND POLYSOMES
H0085	Human Colon
H0086	Human epithelioid sarcoma

H0087	Human Thymus
H0090	Human T-Cell Lymphoma
H0097	Human Adult Heart, subtracted
H0098	Human Adult Liver, subtracted
H0100	Human Whole Six Week Old Embryo
H0101	Human 7 Weeks Old Embryo, subtracted
H0102	Human Whole 6 Week Old Embryo (II), sub
H0105	Human Fetal Heart, subtracted
H0107	Human Infant Adrenal Gland, subtracted
H0108	Human Adult Lymph Node, subtracted
H0116	Human Thymus Tumor, subtracted
H0119	Human Pediatric Kidney
H0122	Human Adult Skeletal Muscle
H0123	Human Fetal Dura Mater
H0124	Human Rhabdomyosarcoma
H0125	Cem cells cyclohexamide treated
H0130	LNCAP untreated
H0131	LNCAP + 0.3nM R1881
H0132	LNCAP + 30nM R1881
H0134	Raji Cells, cyclohexamide treated
H0135	Human Synovial Sarcoma
H0136	Supt Cells, cyclohexamide treated
H0144	Nine Week Old Early Stage Human
H0147	Human Adult Liver
H0150	Human Epididymus
H0153	Human adult lymph node, subtracted
H0156	Human Adrenal Gland Tumor
H0159	Activated T-Cells, 8 hrs., ligation 2
H0163	Human Synovium
H0165	Human Prostate Cancer, Stage B2
H0166	Human Prostate Cancer, Stage B2 fraction
H0169	Human Prostate Cancer, Stage C fraction
H0170	12 Week Old Early Stage Human
H0171	12 Week Old Early Stage Human, II
H0173	Human Cardiomyopathy, RNA remake
H0176	CAMA1Ee Cell Line
H0177	CAMA1Ee Cell Line
H0178	Human Fetal Brain
H0179	Human Neutrophil
H0181	Human Primary Breast Cancer
H0182	Human Primary Breast Cancer
H0183	Human Colon Cancer
H0184	Human Colon Cancer, metastasized to live
H0186	Activated T-Cell
H0187	Resting T-Cell
H0188	Human Normal Breast
H0194	Human Cerebellum, subtracted
H0196	Human Cardiomyopathy, subtracted
H0197	Human Fetal Liver, subtracted



H0200	Human Greater Omentum, fract II remake,
H0201	Human Hippocampus, subtracted
H0204	Human Colon Cancer, subtracted
H0205	Human Colon Cancer, differential
H0207	LNCAP, differential expression
H0208	Early Stage Human Lung, subtracted
H0212	Human Prostate, subtracted
H0213	Human Pituitary, subtracted
H0214	Raji cells, cyclohexamide treated, subtracted
H0216	Supt cells, cyclohexamide treated, subtracted
H0222	Activated T-Cells, 8 hrs, subtracted
H0225	Activated T-Cells, 12hrs, differentially expressed
H0231	Human Colon, subtraction
H0232	Human Colon, differential expression
H0234	human colon cancer, metastatic to liver, differentially expressed
H0235	Human colon cancer, metatized to liver, subtraction
H0238	Human Myometrium Leiomyoma
H0239	Human Kidney Tumor
H0242	Human Fetal Heart, Differential (Fetal-Specific)
H0244	Human 8 Week Whole Embryo, subtracted
H0247	Human Membrane Bound Polysomes- Enzyme Subtraction
H0250	Human Activated Monocytes
H0251	Human Chondrosarcoma
H0252	Human Osteosarcoma
H0253	Human adult testis, large inserts
H0254	Breast Lymph node cDNA library
H0255	breast lymph node CDNA library
H0257	HL-60, PMA 4H
H0261	H. cerebellum, Enzyme subtracted
H0263	human colon cancer
H0264	human tonsils
H0265	Activated T-Cell (12hs)/Thiouridine labelledEco
H0266	Human Microvascular Endothelial Cells, fract. A
H0267	Human Microvascular Endothelial Cells, fract. B
H0268	Human Umbilical Vein Endothelial Cells, fract. A
H0269	Human Umbilical Vein Endothelial Cells, fract. B
H0271	Human Neutrophil, Activated
H0272	HUMAN TONSILS, FRACTION 2
H0274	Human Adult Spleen, fractionII
H0284	Human OB MG63 control fraction I
H0286	Human OB MG63 treated (10 nM E2) fraction I
H0288	Human OB HOS control fraction I
H0290	Human OB HOS treated (1 nM E2) fraction I
H0292	Human OB HOS treated (10 nM E2) fraction I
H0294	Amniotic Cells - TNF induced
H0295	Amniotic Cells - Primary Culture
H0298	HCBB's differential consolidation
H0305	CD34 positive cells (Cord Blood)
H0306	CD34 depleted Buffy Coat (Cord Blood)

H0309	Human Chronic Synovitis
H0313	human pleural cancer
H0316	HUMAN STOMACH
H0318	HUMAN B CELL LYMPHOMA
H0320	Human frontal cortex
H0321	HUMAN SCHWANOMA
H0327	human corpus colosum
H0328	human ovarian cancer
H0329	Dermatofibrosarcoma Protuberance
H0331	Hepatocellular Tumor
H0333	Hemangiopericytoma
H0334	Kidney cancer
H0340	Corpus Callosum
H0341	Bone Marrow Cell Line (RS4,11)
H0343	stomach cancer (human)
H0345	SKIN
H0351	Glioblastoma
H0352	wilm's tumor
H0354	Human Leukocytes
H0355	Human Liver
H0356	Human Kidney
H0359	KMH2 cell line
H0361	Human rejected kidney
H0369	H. Atrophic Endometrium
H0370	H. Lymph node breast Cancer
H0372	Human Testes
H0373	Human Heart
H0374	Human Brain
H0375	Human Lung
H0376	Human Spleen
H0379	Human Tongue, frac 1
H0380	Human Tongue, frac 2
H0381	Bone Cancer
H0383	Human Prostate BPH, re-excision
H0384	Brain, Kozak
H0386	Leukocyte and Lung, 4 screens
H0390	Human Amygdala Depression, re-excision
H0391	H. Meningioma, M6
H0392	H. Meningioma, M1
H0393	Fetal Liver, subtraction II
H0395	A1-CELL LINE
H0399	Human Kidney Cortex, re-rescue
H0402	CD34 depleted Buffy Coat (Cord Blood), re-excision
H0403	H. Umbilical Vein Endothelial Cells, IL4 induced
H0408	Human kidney Cortex, subtracted
H0411	H Female Bladder, Adult
H0412	Human umbilical vein endothelial cells, IL-4 induced
H0413	Human Umbilical Vein Endothelial Cells, uninduced
H0415	H. Ovarian Tumor, II, OV5232

H0416	Human Neutrophils, Activated, re-excision
H0419	Bone Cancer, re-excision
H0421	Human Bone Marrow, re-excision
H0422	T-Cell PHA 16 hrs
H0423	T-Cell PHA 24 hrs
H0424	Human Pituitary, subt IX
H0427	Human Adipose
H0428	Human Ovary
H0431	H. Kidney Medulla, re-excision
H0433	Human Umbilical Vein Endothelial cells, frac B, re-excision
H0435	Ovarian Tumor 10-3-95
H0436	Resting T-Cell Library,II
H0437	H Umbilical Vein Endothelial Cells, frac A, re-excision
H0438	H. Whole Brain #2, re-excision
H0441	H. Kidney Cortex, subtracted
H0444	Spleen metastatic melanoma
H0445	Spleen, Chronic lymphocytic leukemia
H0453	H. Kidney Pyramid, subtracted
H0455	H. Striatum Depression, subt
H0457	Human Eosinophils
H0458	CD34+ cell, I, frac II
H0459	CD34+cells, II, FRACTION 2
H0461	H. Kidney Medulla, subtracted
H0477	Human Tonsil, Lib 3
H0478	Salivary Gland, Lib 2
H0479	Salivary Gland, Lib 3
H0483	Breast Cancer cell line, MDA 36
H0484	Breast Cancer Cell line, angiogenic
H0485	Hodgkin's Lymphoma I
H0486	Hodgkin's Lymphoma II
H0487	Human Tonsils, lib I
H0488	Human Tonsils, Lib 2
H0489	Crohn's Disease
H0492	HL-60, RA 4h, Subtracted
H0494	Keratinocyte
H0497	HEL cell line
H0506	Ulcerative Colitis
H0509	Liver, Hepatoma
H0510	Human Liver, normal
H0512	Keratinocyte, lib 3
H0517	Nasal polyps
H0518	pBMC stimulated w/ poly I/C
H0519	NTERA2, control
H0520	NTERA2 + retinoic acid, 14 days
H0521	Primary Dendritic Cells, lib 1
H0522	Primary Dendritic cells,frac 2
H0525	PCR, pBMC I/C treated
H0528	Poly[I]/Poly[C] Normal Lung Fibroblasts
H0529	Myeloid Progenitor Cell Line

H0530	Human Dermal Endothelial Cells,untreated
H0535	Human ovary tumor cell OV350721
H0538	Merkel Cells
H0539	Pancreas Islet Cell Tumor
H0540	Skin, burned
H0542	T Cell helper I
H0543	T cell helper II
H0544	Human endometrial stromal cells
H0545	Human endometrial stromal cells-treated with progesterone
H0546	Human endometrial stromal cells-treated with estradiol
H0547	NTERA2 teratocarcinoma cell line+retinoic acid (14 days)
H0549	H. Epididymus, caput & corpus
H0550	H. Epididymus, cauda
H0551	Human Thymus Stromal Cells
H0553	Human Placenta
H0555	Rejected Kidney, lib 4
H0556	Activated T-cell(12h)/Thiouridine-re-excision
H0559	HL-60, PMA 4H, re-excision
H0560	KMH2
H0561	L428
H0562	Human Fetal Brain, normalized c5-11-26
H0563	Human Fetal Brain, normalized 50021F
H0565	HUMAN Fetal Brain, normalized 100024F
H0569	Human Fetal Brain, normalized CO
H0570	Human Fetal Brain, normalized C500H
H0572	Human Fetal Brain, normalized AC5002
H0574	Hepatocellular Tumor, re-excision
H0575	Human Adult Pulmonary, re-excision
H0576	Resting T-Cell, re-excision
H0579	Pericardium
H0580	Dendritic cells, pooled
H0581	Human Bone Marrow, treated
H0583	B Cell lymphoma
H0584	Activated T-cells, 24 hrs, re-excision
H0585	Activated T-Cells, 12 hrs, re-excision
H0586	Healing groin wound, 6.5 hours post incision
H0587	Healing groin wound, 7.5 hours post incision
H0590	Human adult small intestine, re-excision
H0591	Human T-cell lymphoma, re-excision
H0592	Healing groin wound - zero hr post-incision (control)
H0593	Olfactory epithelium, nasal cavity
H0594	Human Lung Cancer, re-excision
H0595	Stomach cancer (human), re-excision
H0596	Human Colon Cancer, re-excision
H0597	Human Colon, re-excision
H0598	Human Stomach, re-excision
H0599	Human Adult Heart, re-excision
H0600	Healing Abdomen wound, 70&90 min post incision
H0601	Healing Abdomen Wound, 15 days post incision

H0602	Healing Abdomen Wound, 21 & 29 days post incision
H0606	Human Primary Breast Cancer, re-excision
H0609	H. Leukocytes, normalized cot > 500A
H0613	H. Leukocytes, normalized cot 5B
H0615	Human Ovarian Cancer Reexcision
H0616	Human Testes, Reexcision
H0617	Human Primary Breast Cancer Reexcision
H0618	Human Adult Testes, Large Inserts, Reexcision
H0619	Fetal Heart
H0620	Human Fetal Kidney, Reexcision
H0622	Human Pancreas Tumor, Reexcision
H0623	Human Umbilical Vein, Reexcision
H0624	12 Week Early Stage Human II, Reexcision
H0625	Ku 812F Basophils Line
H0626	Saos2 Cells, Untreated
H0627	Saos2 Cells, Vitamin D3 Treated
H0628	Human Pre-Differentiated Adipocytes
H0631	Saos2, Dexamethosome Treated
H0632	Hepatocellular Tumor, re-excision
H0633	Lung Carcinoma A549 TNFalpha activated
H0634	Human Testes Tumor, re-excision
H0635	Human Activated T-Cells, re-excision
H0638	CD40 activated monocyte dendritic cells
H0641	LPS activated derived dendritic cells
H0642	Hep G2 Cells, lambda library
H0643	Hep G2 Cells, PCR library
H0644	Human Placenta (re-excision)
H0645	Fetal Heart, re-excision
H0646	Lung, Cancer (4005313 A3): Invasive Poorly Differentiated Lung Adenocarcinoma,
H0647	Lung, Cancer (4005163 B7): Invasive, Poorly Diff. Adenocarcinoma, Metastatic
H0648	Ovary, Cancer: (4004562 B6) Papillary Serous Cystic Neoplasm, Low Malignant Pot
H0649	Lung, Normal: (4005313 B1)
H0650	B-Cells
H0651	Ovary, Normal: (9805C040R)
H0652	Lung, Normal: (4005313 B1)
H0653	Stromal Cells
H0654	Lung, Cancer: (4005313 A3) Invasive Poorly-differentiated Metastatic lung adenoc
H0656	B-cells (unstimulated)
H0657	B-cells (stimulated)
H0658	Ovary, Cancer (9809C332): Poorly differentiated adenocarcinoma
H0659	Ovary, Cancer (15395A1F): Grade II Papillary Carcinoma
H0660	Ovary, Cancer: (15799A1F) Poorly differentiated carcinoma
H0661	Breast, Cancer: (4004943 A5)
H0662	Breast, Normal: (4005522B2)
H0663	Breast, Cancer: (4005522 A2)
H0664	Breast, Cancer: (9806C012R)

H0665	Stromal cells 3.88
H0666	Ovary, Cancer: (4004332 A2)
H0667	Stromal cells(HBM3.18)
H0668	stromal cell clone 2.5
H0669	Breast, Cancer: (4005385 A2)
H0670	Ovary, Cancer(4004650 A3): Well-Differentiated Micropapillary Serous Carcinoma
H0671	Breast, Cancer: (9802C02OE)
H0672	Ovary, Cancer: (4004576 A8)
H0673	Human Prostate Cancer, Stage B2, re-excision
H0674	Human Prostate Cancer, Stage C, re-excision
H0675	Colon, Cancer: (9808C064R)
H0676	Colon, Cancer: (9808C064R)-total RNA
H0677	TNFR degenerate oligo
H0682	Ovarian cancer, Serous Papillary Adenocarcinoma
H0683	Ovarian Serous Papillary Adenocarcinoma
H0684	Serous Papillary Adenocarcinoma
H0685	Adenocarcinoma of Ovary, Human Cell Line, # OVCAR-3
H0686	Adenocarcinoma of Ovary, Human Cell Line
H0687	Human normal ovary(#9610G215)
H0688	Human Ovarian Cancer(#9807G017)
H0689	Ovarian Cancer
H0690	Ovarian Cancer, # 9702G001
H0691	Normal Ovary, #9710G208
H0693	Normal Prostate #ODQ3958EN
H0694	Prostate gland adenocarcinoma
H0695	mononucleocytes from patient
H0696	Prostate Adenocarcinoma
H0702	NK15(IL2 treated for 48 hours)
L0002	Atrium cDNA library Human heart
L0005	Clontech human aorta polyA+ mRNA (#6572)
L0021	Human adult (K.Okubo)
L0022	Human adult lung 3' directed MboI cDNA
L0040	Human colon mucosa
L0041	Human epidermal keratinocyte
L0053	Human pancreatic tumor
L0054	Human PGasparini
L0055	Human promyelocyte
L0065	Liver HepG2 cell line.
L0096	Subtracted human retina
L0105	Human aorta polyA+ (TFujiwara)
L0140	Human pancreatic cancer (CWallrapp)
L0142	Human placenta cDNA (TFujiwara)
L0143	Human placenta polyA+ (TFujiwara)
L0157	Human fetal brain (TFujiwara)
L0163	Human heart cDNA (YNakamura)
L0167	Human thymus (V.L.Boyartchuk)
L0193	Human osteosarcoma EGracia
L0194	Human pancreatic cancer cell line Patu 8988t

L0351	Infant brain, Bento Soares
L0352	Normalized infant brain, Bento Soares
L0361	Stratagene ovary (#937217)
L0362	Stratagene ovarian cancer (#937219)
L0363	NCI CGAP GC2
L0364	NCI CGAP GC5
L0365	NCI CGAP Phe1
L0366	Stratagene schizo brain S11
L0367	NCI CGAP Sch1
L0368	NCI CGAP SS1
L0369	NCI CGAP AA1
L0370	Johnston frontal cortex
L0371	NCI CGAP Br3
L0372	NCI CGAP Co12
L0373	NCI CGAP Co11
L0374	NCI CGAP Co2
L0375	NCI CGAP Kid6
L0376	NCI CGAP Lar1
L0378	NCI CGAP Lu1
L0381	NCI CGAP HN4
L0382	NCI CGAP Pr25
L0383	NCI CGAP Pr24
L0384	NCI CGAP Pr23
L0386	NCI CGAP HN3
L0387	NCI CGAP GCB0
L0388	NCI CGAP HN6
L0389	NCI CGAP HN5
L0394	H, Human adult Brain Cortex tissue
L0415	b4HB3MA Cot8-HAP-Ft
L0435	Infant brain, LLNL array of Dr. M. Soares 1NIB
L0438	normalized infant brain cDNA
L0439	Soares infant brain 1NIB
L0444	HB3MK
L0455	Human retina cDNA randomly primed sublibrary
L0456	Human retina cDNA Tsp509I-cleaved sublibrary
L0462	WATM1
L0471	Human fetal heart, Lambda ZAP Express
L0475	KG1-a Lambda Zap Express cDNA library
L0483	Human pancreatic islet
L0485	STRATAGENE Human skeletal muscle cDNA library, cat. #936215.
L0493	NCI CGAP Ov26
L0499	NCI CGAP HSC2
L0500	NCI CGAP Brn20
L0502	NCI CGAP Br15
L0503	NCI CGAP Br17
L0504	NCI CGAP Br13
L0505	NCI CGAP Br12
L0506	NCI CGAP Br16
L0507	NCI CGAP Br14

L0508	NCI CGAP Lu25
L0509	NCI CGAP Lu26
L0510	NCI CGAP Ov33
L0511	NCI CGAP Ov34
L0512	NCI CGAP Ov36
L0515	NCI CGAP Ov32
L0517	NCI CGAP Pr1
L0518	NCI CGAP Pr2
L0519	NCI CGAP Pr3
L0520	NCI CGAP Alv1
L0521	NCI CGAP Ew1
L0522	NCI CGAP Kid1
L0523	NCI CGAP Lip2
L0524	NCI CGAP Li1
L0526	NCI CGAP Pr12
L0527	NCI CGAP Ov2
L0528	NCI CGAP Pr5
L0529	NCI CGAP Pr6
L0530	NCI CGAP Pr8
L0532	NCI CGAP Thy1
L0534	Chromosome 7 Fetal Brain cDNA Library
L0539	Chromosome 7 Placental cDNA Library
L0540	NCI CGAP Pr10
L0541	NCI CGAP Pr7
L0542	NCI CGAP Pr11
L0543	NCI CGAP Pr9
L0544	NCI CGAP Pr4
L0545	NCI CGAP Pr4.1
L0553	NCI CGAP Co22
L0558	NCI CGAP Ov40
L0560	NCI CGAP HN12
L0562	Chromosome 7 HeLa cDNA Library
L0563	Human Bone Marrow Stromal Fibroblast
L0564	Jia bone marrow stroma
L0565	Normal Human Trabecular Bone Cells
L0581	Stratagene liver (#937224)
L0583	Stratagene cDNA library Human fibroblast, cat#937212
L0586	HTCDL1
L0587	Stratagene colon HT29 (#937221)
L0588	Stratagene endothelial cell 937223
L0589	Stratagene fetal retina 937202
L0590	Stratagene fibroblast (#937212)
L0591	Stratagene HeLa cell s3 937216
L0592	Stratagene hNT neuron (#937233)
L0593	Stratagene neuroepithelium (#937231)
L0594	Stratagene neuroepithelium NT2RAMI 937234
L0595	Stratagene NT2 neuronal precursor 937230
L0596	Stratagene colon (#937204)
L0597	Stratagene corneal stroma (#937222)



L0598	Morton Fetal Cochlea
L0599	Stratagene lung (#937210)
L0600	Weizmann Olfactory Epithelium
L0601	Stratagene pancreas (#937208)
L0602	Pancreatic Islet
L0603	Stratagene placenta (#937225)
L0604	Stratagene muscle 937209
L0605	Stratagene fetal spleen (#937205)
L0606	NCI CGAP Lym5
L0608	Stratagene lung carcinoma 937218
L0611	Schiller meningioma
L0617	Chromosome 22 exon
L0622	HM1
L0623	HM3
L0626	NCI CGAP GC1
L0627	NCI CGAP Co1
L0628	NCI CGAP Ov1
L0629	NCI CGAP Mel3
L0630	NCI CGAP CNS1
L0631	NCI CGAP Br7
L0634	NCI CGAP Ov8
L0636	NCI CGAP Pit1
L0637	NCI CGAP Bm53
L0638	NCI CGAP Bm35
L0639	NCI CGAP Bm52
L0640	NCI CGAP Br18
L0641	NCI CGAP Co17
L0642	NCI CGAP Co18
L0643	NCI CGAP Co19
L0644	NCI CGAP Co20
L0645	NCI CGAP Co21
L0646	NCI CGAP Co14
L0647	NCI CGAP Sar4
L0648	NCI CGAP Eso2
L0649	NCI CGAP GU1
L0650	NCI CGAP Kid13
L0651	NCI CGAP Kid8
L0652	NCI CGAP Lu27
L0653	NCI CGAP Lu28
L0654	NCI CGAP Lu31
L0655	NCI CGAP Lym12
L0656	NCI CGAP Ov38
L0657	NCI CGAP Ov23
L0658	NCI CGAP Ov35
L0659	NCI CGAP Pan1
L0661	NCI CGAP Mel15
L0662	NCI CGAP Gas4
L0663	NCI CGAP Ut2
L0664	NCI CGAP Ut3

L0665	NCI CGAP Ut4
L0666	NCI CGAP Ut1
L0667	NCI CGAP CML1
L0683	Stanley Frontal NS pool 2
L0686	Stanley Frontal SN pool 2
L0689	Stanley Hippocampus SN pool 1
L0698	Testis 2
L0717	Gessler Wilms tumor
L0720	PN001-Normal Human Prostate
L0731	Soares_pregnant_uterus_NbHPU
L0738	Human colorectal cancer
L0740	Soares melanocyte 2NbHM
L0741	Soares adult brain N2b4HB55Y
L0742	Soares adult brain N2b5HB55Y
L0743	Soares breast 2NbHBst
L0744	Soares breast 3NbHBst
L0745	Soares retina N2b4HR
L0746	Soares retina N2b5HR
L0747	Soares_fetal_heart_NbHH19W
L0748	Soares_fetal_liver_spleen_1NFLS
L0749	Soares_fetal_liver_spleen_1NFLS_S1
L0750	Soares_fetal_lung_NbHL19W
L0751	Soares ovary tumor NbHOT
L0752	Soares_parathyroid_tumor_NbHPA
L0753	Soares_pineal_gland_N3HPG
L0754	Soares_placenta_Nb2HP
L0755	Soares_placenta_8to9weeks_2NbHP8to9W
L0756	Soares_multiple_sclerosis_2NbHMSP
L0757	Soares_senescent_fibroblasts_NbHSF
L0758	Soares_testis_NHT
L0759	Soares_total_fetus_Nb2HF8_9w
L0761	NCI CGAP CLL1
L0762	NCI CGAP Br1.1
L0763	NCI CGAP Br2
L0764	NCI CGAP Co3
L0765	NCI CGAP Co4
L0766	NCI CGAP GCB1
L0767	NCI CGAP GC3
L0768	NCI CGAP GC4
L0769	NCI CGAP Brm25
L0770	NCI CGAP Brm23
L0771	NCI CGAP Co8
L0772	NCI CGAP Co10
L0773	NCI CGAP Co9
L0774	NCI CGAP Kid3
L0775	NCI CGAP Kid5
L0776	NCI CGAP Lu5
L0777	Soares_NhHMPu_S1
L0779	Soares_NFL_T_GBC_S1

L0780	Soares_NSF_F8_9W_OT_PA_P_S1
L0782	NCI_CGAP_Pr21
L0783	NCI_CGAP_Pr22
L0784	NCI_CGAP_Lei2
L0785	Barstead_spleen_HPLRB2
L0786	Soares_NbHFB
L0787	NCI_CGAP_Sub1
L0788	NCI_CGAP_Sub2
L0789	NCI_CGAP_Sub3
L0790	NCI_CGAP_Sub4
L0791	NCI_CGAP_Sub5
L0792	NCI_CGAP_Sub6
L0793	NCI_CGAP_Sub7
L0794	NCI_CGAP_GC6
L0796	NCI_CGAP_Brn50
L0800	NCI_CGAP_Co16
L0803	NCI_CGAP_Kid11
L0804	NCI_CGAP_Kid12
L0805	NCI_CGAP_Lu24
L0806	NCI_CGAP_Lu19
L0807	NCI_CGAP_Ov18
L0808	Barstead_prostate_BPH_HPLRB4_1
L0809	NCI_CGAP_Pr28
N0007	Human_Hippocampus
N0009	Human_Hippocampus, prescreened
S0001	Brain frontal cortex
S0002	Monocyte activated
S0003	Human Osteoclastoma
S0004	Prostate
S0006	Neuroblastoma
S0007	Early Stage Human Brain
S0010	Human Amygdala
S0011	STROMAL -OSTEOCLASTOMA
S0013	Prostate
S0014	Kidney Cortex
S0015	Kidney medulla
S0022	Human Osteoclastoma Stromal Cells - unamplified
S0026	Stromal cell TF274
S0027	Smooth muscle, serum treated
S0028	Smooth muscle, control
S0029	brain stem
S0031	Spinal cord
S0032	Smooth muscle-ILb induced
S0036	Human Substantia Nigra
S0037	Smooth muscle, IL1b induced
S0038	Human Whole Brain #2 - Oligo dT > 1.5Kb
S0040	Adipocytes
S0044	Prostate BPH
S0045	Endothelial cells-control

S0046	Endothelial-induced
S0048	Human Hypothalamus, Alzheimer's
S0049	Human Brain, Striatum
S0050	Human Frontal Cortex, Schizophrenia
S0051	Human Hypothalamus, Schizophrenia
S0052	neutrophils control
S0053	Neutrophils IL-1 and LPS induced
S0106	STRIATUM DEPRESSION
S0112	Hypothalamus
S0114	Anergic T-cell
S0116	Bone marrow
S0122	Osteoclastoma-normalized A
S0126	Osteoblasts
S0132	Epithelial-TNF $\alpha$ and INF induced
S0134	Apoptotic T-cell
S0136	PERM TF274
S0140	eosinophil-IL5 induced
S0142	Macrophage-oxLDL
S0144	Macrophage (GM-CSF treated)
S0146	prostate-edited
S0148	Normal Prostate
S0150	LNCAP prostate cell line
S0152	PC3 Prostate cell line
S0174	Prostate-BPH subtracted II
S0176	Prostate, normal, subtraction I
S0182	Human B Cell 8866
S0188	Prostate, BPH, Lib 2
S0190	Prostate BPH, Lib 2, subtracted
S0192	Synovial Fibroblasts (control)
S0194	Synovial hypoxia
S0196	Synovial IL-1/TNF stimulated
S0206	Smooth Muscle- HASTE normalized
S0208	Mesangial cell, frac 1
S0210	Mesangial cell, frac 2
S0212	Bone Marrow Stromal Cell, untreated
S0214	Human Osteoclastoma, re-excision
S0216	Neutrophils IL-1 and LPS induced
S0218	Apoptotic T-cell, re-excision
S0222	H. Frontal cortex, epileptic, re-excision
S0242	Synovial Fibroblasts (II1/TNF), subt
S0250	Human Osteoblasts II
S0260	Spinal Cord, re-excision
S0276	Synovial hypoxia-RSF subtracted
S0278	H Macrophage (GM-CSF treated), re-excision
S0280	Human Adipose Tissue, re-excision
S0282	Brain Frontal Cortex, re-excision
S0294	Larynx tumor
S0300	Frontal lobe, dementia, re-excision
S0306	Larynx normal #10 261-273

S0312	Human osteoarthritic, fraction II
S0314	Human osteoarthritis, fraction I
S0318	Human Normal Cartilage Fraction II
S0320	Human Larynx
S0322	Siebben Polyposis
S0328	Palate carcinoma
S0330	Palate normal
S0332	Pharynx carcinoma
S0334	Human Normal Cartilage Fraction III
S0342	Adipocytes, re-excision
S0344	Macrophage-oxLDL, re-excision
S0346	Human Amygdala, re-excision
S0348	Cheek Carcinoma
S0350	Pharynx Carcinoma
S0354	Colon Normal II
S0356	Colon Carcinoma
S0358	Colon Normal III
S0360	Colon Tumor II
S0362	Human Gastrocnemius
S0364	Human Quadriceps
S0366	Human Soleus
S0370	Larynx carcinoma II
S0372	Larynx carcinoma III
S0374	Normal colon
S0376	Colon Tumor
S0378	Pancreas normal PCA4 No
S0380	Pancreas Tumor PCA4 Tu
S0382	Larynx carcinoma IV
S0384	Tongue carcinoma
S0386	Human Whole Brain, re-excision
S0388	Human Hypothalamus, schizophrenia, re-excision
S0390	Smooth muscle, control, re-excision
S0392	Salivary Gland
S0394	Stomach, normal
S0402	Adrenal Gland, normal
S0404	Rectum normal
S0406	Rectum tumour
S0408	Colon, normal
S0410	Colon, tumour
S0414	Hippocampus, Alzheimer Subtracted
S0418	CHME Cell Line, treated 5 hrs
S0420	CHME Cell Line, untreated
S0422	Mo7e Cell Line GM-CSF treated (1ng/ml)
S0424	TF-1 Cell Line GM-CSF Treated
S0426	Monocyte activated, re-excision
S0428	Neutrophils control, re-excision
S0430	Aryepiglottis Normal
S0432	Sinus piniformis Tumour
S0434	Stomach Normal

S0436	Stomach Tumour
S0438	Liver Normal Met5No
S0440	Liver Tumour Met 5 Tu
S0442	Colon Normal
S0444	Colon Tumor
S0446	Tongue Tumour
S0448	Larynx Normal
S0450	Larynx Tumour
S0452	Thymus
S0454	Placenta
S0456	Tongue Normal
S0458	Thyroid Normal (SDCA2 No)
S0460	Thyroid Tumour
S0462	Thyroid Thyroiditis
S0464	Larynx Normal
S0468	Ea.hy.926 cell line
S0472	Lung Mesothelium
S0474	Human blood platelets
S3012	Smooth Muscle Serum Treated, Norm
S3014	Smooth muscle, serum induced,re-exc
S6014	H. hypothalamus, frac A
S6016	H. Frontal Cortex, Epileptic
S6022	H. Adipose Tissue
S6024	Alzheimers, spongy change
S6026	Frontal Lobe, Dementia
S6028	Human Manic Depression Tissue
T0002	Activated T-cells
T0003	Human Fetal Lung
T0006	Human Pineal Gland
T0008	Colorectal Tumor
T0010	Human Infant Brain
T0023	Human Pancreatic Carcinoma
T0039	HSA 172 Cells
T0040	HSC172 cells
T0041	Jurkat T-cell G1 phase
T0042	Jurkat T-Cell, S phase
T0048	Human Aortic Endothelium
T0049	Aorta endothelial cells + TNF-a
T0060	Human White Adipose
T0067	Human Thyroid
T0068	Normal Ovary, Premenopausal
T0069	Human Uterus, normal
T0071	Human Bone Marrow
T0074	Human Adult Retina
T0079	Human Kidney, normal Adult
T0082	Human Adult Retina
T0103	Human colon carcinoma (HCC) cell line
T0104	HCC cell line metastasis to liver
T0109	Human (HCC) cell line liver (mouse) metastasis, remake

T0110	Human colon carcinoma (HCC) cell line, remake
T0114	Human (Caco-2) cell line, adenocarcinoma, colon, remake
T0115	Human Colon Carcinoma (HCC) cell line

Table 6

OMIM ID	OMIM Description
100650	Alcohol intolerance, acute (3) ?Fetal alcohol syndrome (1)
100690	Myasthenic syndrome, slow-channel congenital, 601462 (3)
100710	Myasthenic syndrome, slow-channel congenital, 601462 (3)
100730	Myasthenia gravis, neonatal transient (2)
101000	Malignant mesothelioma, sporadic (3) Meningioma, NF2-related, sporadic (3) Schwannoma, sporadic (3) Neurofibromatosis, type 2 (3) Neurolemmomatosis (3)
102200	Somatotrophinoma (2)
102540	Cardiomyopathy, idiopathic dilated (3)
102578	Leukemia, acute promyelocytic, PML/RARA type (3)
102600	Urolithiasis, 2,8-dihydroxyadenine (3)
102770	Myoadenylate deaminase deficiency (3)
102772	[AMP deaminase deficiency, erythrocytic] (3)
103000	Hemolytic anemia due to adenylate kinase deficiency (3)
103050	Adenylosuccinase deficiency (1) Autism, succinylpurinemic (3)
103581	Albright hereditary osteodystrophy-2 (2) (?)
103600	Analbuminemia (3) [Dysalbuminemic hyperthyroxinemia] (3) [Dysalbuminemic hyperzincemia], 194470 (3)
103720	Alcoholism, susceptibility to (1)
103850	Aldolase A deficiency (3)
103950	Emphysema due to alpha-2-macroglobulin deficiency (1)
104150	[AFP deficiency, congenital] (1) [Hereditary persistence of alpha-fetoprotein] (3)
104311	Alzheimer disease-3 (3)
104500	Amelogenesis imperfecta-2, hypoplastic local type (2)
104614	Cystinuria, 220100 (3)
104770	?Amyloidosis, secondary, susceptibility to (1)
105580	Anal canal carcinoma (2) (?)
105600	Dyserythropoietic anemia, congenital, type III (2)
106100	Angioedema, hereditary (3)
106150	Hypertension, essential, susceptibility to (3) Preeclampsia, susceptibility to (3)
106165	Hypertension, essential, 145500 (3)
106180	Myocardial infarction, susceptibility to (3)
106210	Aniridia (3) Cataract, congenital, with late-onset corneal dystrophy (3) Foveal hypoplasia, isolated, 136520 (3) Peters anomaly (3)
106300	Ankylosing spondylitis (2)
107250	Anterior segment mesenchymal dysgenesis (2)
107271	CD59 deficiency (3)
107280	Alpha-1-antichymotrypsin deficiency (3) Cerebrovascular disease, occlusive (3)



107300	Antithrombin III deficiency (3)
107400	Emphysema (3) Emphysema-cirrhosis (3)
107470	Atypical mycobacterial infection, familial disseminated, 209950 (3) BCG infection, generalized familial (3) Tuberculosis, susceptibility to (3)
107670	Apolipoprotein A-II deficiency (3)
107680	Amyloidosis, 3 or more types (3) ApoA-I and apoC-III deficiency, combined (3) Corneal clouding, autosomal recessive (3) Hypertriglyceridemia, one form (3) Hypoalphalipoproteinemia (3)
107720	Hypertriglyceridemia (3)
107730	Abetalipoproteinemia (3) Apolipoprotein B-100, ligand-defective (3) Hyperbetalipoproteinemia (3) Hypobetalipoproteinemia (3)
107741	Hyperlipoproteinemia, type III (3)
107776	Colton blood group, 110450 (3)
107777	Diabetes insipidus, nephrogenic, autosomal recessive, 222000 (3)
107910	Gynecomastia, familial, due to increased aromatase activity (1) Virilization, maternal and fetal, from placental aromatase deficiency (3)
107970	Arrhythmogenic right ventricular dysplasia-1 (2)
108120	Distal arthrogyrosis-1 (2)
108725	Atherosclerosis, susceptibility to (2)
108730	Brody myopathy, 601003 (3)
108800	Atrial septal defect, secundum type (2)
108962	Hypertension, salt-resistant (1) (?)
108985	Atrophia areata (2)
109150	Machado-Joseph disease (3)
109270	Hemolytic anemia due to band 3 defect (3) Renal tubular acidosis, distal, 179800 (3) Spherocytosis, hereditary (3) [Acanthocytosis, one form] (1) [Elliptocytosis, Malaysian-Melanesian type] (3)
109400	Basal cell nevus syndrome (2)
109543	Leukemia, chronic lymphocytic, B-cell (2)
109560	Leukemia/lymphoma, B-cell, 3 (2)
109690	Asthma, nocturnal, susceptibility to (3) Obesity, susceptibility to (3)
109700	Hemodialysis-related amyloidosis (1)
110100	Blepharophimosis, epicanthus inversus, and ptosis, type I (2)
110700	Vivax malaria, susceptibility to (1)
112250	Bone dysplasia with medullary fibrosarcoma (2)
112261	Fibrodysplasia ossificans progressiva (1) (?)
112262	Fibrodysplasia ossificans progressiva, 135100 (1) (?)
112410	Hypertension with brachydactyly (2)
113100	Brachydactyly, type C (2)
113300	Brachydactyly type E (2) (?)
113520	Hyperleucinemia-isoleucinemia or hypervalinemia (1) (?)

113705	Breast cancer-1 (3) Ovarian cancer (3)
113721	Breast cancer (1)
113900	Heart block, progressive familial, type I (2)
114130	Osteoporosis (3)
114208	Hypokalemic periodic paralysis, 170400 (3) Malignant hyperthermia susceptibility 5, 601887 (3)
114240	Muscular dystrophy, limb-girdle, type 2A, 253600 (3)
114290	Campomelic dysplasia with autosomal sex reversal (3)
114350	Leukemia, acute myeloid (2)
114400	Lynch cancer family syndrome II (2) (?)
114550	Hepatocellular carcinoma (1)
114835	Monocyte carboxyesterase deficiency (1) (?)
115500	Acatalasemia (3)
115650	Cataract, anterior polar-1 (2) (?)
115660	Cataract, cerulean, type 1 (2)
116600	Cataract, posterior polar (2)
116800	Cataract, Marner type (2)
116806	Colorectal cancer (3)
116860	Cavernous angiomatous malformations (2)
117700	Hemosiderosis, systemic, due to aceruloplasminemia (3) [Hypoceruloplasminemia, hereditary] (1)
118210	Charcot-Marie-Tooth neuropathy-2A (2)
118425	Myotonia congenita, dominant, 160800 (3) Myotonia congenita, recessive, 255700 (3) Myotonia levior, recessive (3)
118470	[CETP deficiency] (3)
118485	Polycystic ovary syndrome with hyperandrogenemia (2)
118504	Epilepsy, benign neonatal, type 1, 121200 (3) Epilepsy, nocturnal frontal lobe, 600513 (3)
118511	Schizophrenia, neurophysiologic defect in (2)
118800	Choreoathetosis, familial paroxysmal (2)
119300	van der Woude syndrome (2)
120070	Alport syndrome, autosomal recessive, 203780 (3)
120110	Metaphyseal chondrodysplasia, Schmid type (3)
120120	Epidermolysis bullosa dystrophica, dominant, 131750 (3) Epidermolysis bullosa dystrophica, recessive, 226600 (3) Epidermolysis bullosa, pretibial, 131850 (3)
120131	Alport syndrome, autosomal recessive, 203780 (3) Hematuria, familial benign (3)
120140	Achondrogenesis-hypochondrogenesis, type II (3) Kniest dysplasia (3) Osteoarthritis, precocious (3) SED congenita (3) SMED Strudwick type (3) Stickler syndrome, type I (3) Wagner syndrome, type II (3)
120150	Ehlers-Danlos syndrome, type VIIA1, 130060 (3) Osteogenesis imperfecta, 4 clinical forms, 166200, 166210, 259420, 166220 (3)

	Osteoporosis, idiopathic, 166710 (3)
120160	Ehlers-Danlos syndrome, type VIIA2, 130060 (3) Marfan syndrome, atypical (3) Osteogenesis imperfecta, 4 clinical forms, 166200, 166210, 259420, 166220 (3) Osteoporosis, idiopathic, 166710 (3)
120180	Aneurysm, familial, 100070 (3) Ehlers-Danlos syndrome, type III (3) Ehlers-Danlos syndrome, type IV, 130050 (3) Fibromuscular dysplasia of arteries, 135580 (3)
120190	Ehlers-Danlos syndrome, type I, 130000 (3)
120215	Ehlers-Danlos syndrome, type I, 130000 (3) Ehlers-Danlos syndrome, type II, 130010 (3)
120220	Bethlem myopathy, 158810 (3)
120240	Bethlem myopathy, 158810 (3)
120250	Bethlem myopathy, 158810 (3)
120260	Epiphyseal dysplasia, multiple, type 2, 600204 (3)
120280	Marshall syndrome, 154780 (3) Stickler syndrome, type III (3)
120290	OSMED syndrome, 215150 (3) Stickler syndrome, type II, 184840 (3)
120435	Colorectal cancer, hereditary, nonpolyposis, type 1 (3) Ovarian cancer (3) Muir-Torre syndrome, 158320 (3)
120436	Colorectal cancer, hereditary nonpolyposis, type 2 (3) Muir-Torre family cancer syndrome, 158320 (3) Turcot syndrome with glioblastoma, 276300 (3)
120470	Colorectal cancer (3)
120550	C1q deficiency, type A (3)
120570	C1q deficiency, type B (3)
120575	C1q deficiency, type C (3)
120580	C1r/C1s deficiency, combined (1)
120620	CR1 deficiency (1) ?SLE susceptibility (1)
120700	C3 deficiency (3)
120810	C4 deficiency (3)
120820	C4 deficiency (3)
120900	C5 deficiency (1)
120920	Measles, susceptibility to (1)
120940	C9 deficiency (3)
120950	C8 deficiency, type I (2)
120960	C8 deficiency, type II (3)
121011	Deafness, autosomal dominant 3, 601544 (3) Deafness, autosomal recessive 1, 220290 (3)
121014	Heterotaxia, viscerotaxial, autosomal recessive (3)
121050	Contractural arachnodactyly, congenital (3)
121300	Coproporphyrinuria (3) Harderoporphyria (3)
121360	Myeloid leukemia, acute, M4Eo subtype (2)
121700	Congenital hereditary endothelial dystrophy of cornea (2)
121800	Corneal dystrophy, crystalline, Schnyder (2)

122000	Corneal dystrophy, posterior polymorphous (2)
122500	[Transcortin deficiency] (1)
122560	ACTH deficiency, 201400 (2)
122720	Coumarin resistance, 122700 (3) Nicotine addiction, protection from (3)
123000	Cranio metaphyseal dysplasia (2)
123101	Craniosynostosis, type 2 (3)
123580	Cataract, congenital, autosomal dominant (3)
123620	Cataract, cerulean, type 2, 601547 (3)
123660	Cataract, Coppock-like (3)
123829	Melanoma (3)
123940	White sponge nevus, 193900 (3)
124030	Debrisoquine sensitivity (3) ?Parkinsonism, susceptibility to (1)
124080	CMO II deficiency (3)
124200	Darier disease (keratosis follicularis) (2)
125270	Porphyria, acute hepatic (3) Lead poisoning, susceptibility to (3)
125490	Dentinogenesis imperfecta-1 (2)
125660	Cardiomyopathy (1) (?) Myopathy, desminopathic (1) (?)
125852	Insulin-dependent diabetes mellitus-2 (2)
126060	Anemia, megaloblastic, due to DHFR deficiency (1) (?)
126090	Hyperphenylalaninemia due to pterin-4a-carbinolamine dehydratase deficiency, 264070 (3)
126150	Diphtheria, susceptibility to (1)
126337	Myxoid liposarcoma (3)
126340	Xeroderma pigmentosum, group D, 278730 (3)
126391	DNA ligase I deficiency (3)
126451	?Schizophrenia, susceptibility to (2)
126452	Autonomic nervous system dysfunction (3) [Novelty seeking personality] (1)
126600	Drusen, radial, autosomal dominant (2)
126650	Chloride diarrhea, congenital, Finnish type, 214700 (3) Colon cancer (1) (?)
128100	Dystonia-1, torsion (3)
129010	Neuropathy, congenital hypomyelinating, 1 (3)
129490	Ectodermal dysplasia-3, anhidrotic (2)
129500	Ectodermal dysplasia, hidrotic (2)
129900	EEC syndrome-1 (2) (?)
130160	Cutis laxa, 123700 (3) Supravalvar aortic stenosis, 185500 (3) Williams-Beuren syndrome, 194050 (3)
130410	Glutaric aciduria, type IIB (3)
130500	Elliptocytosis-1 (3)
130650	Beckwith-Wiedemann syndrome (2)
131100	Carcinoid tumor of lung (3) Multiple endocrine neoplasia I (3) Prolactinoma, hyperparathyroidism, carcinoid syndrome (2)

131195	Hereditary hemorrhagic telangiectasia-1, 187300 (3)
131210	Atherosclerosis, susceptibility to (2)
131242	Shah-Waardenburg syndrome, 277580 (3)
131400	Eosinophilia, familial (2)
131440	Eosinophilic myeloproliferative disorder (2) (?)
132700	Cylindromatosis (2)
132800	Basal cell carcinoma (2) (?) Epithelioma, self-healing, squamous 1, Ferguson-Smith type (2)
133170	Erythremia (1) (?)
133171	[Erythrocytosis, familial], 133100 (3)
133200	Erythrokeratoderma variabilis (2)
133510	Trichothiodystrophy (3) Xeroderma pigmentosum, group B (3)
133530	Xeroderma pigmentosum, group G, 278780 (3)
133540	Cockayne syndrome-2, late onset (2)
133700	Chondrosarcoma, 215300 (3) Exostoses, multiple, type 1 (3)
133701	Exostoses, multiple, type 2 (3)
133780	Vitreoretinopathy, exudative, familial (2)
134370	Factor H deficiency (1) Hemolytic-uremic syndrome, 235400 (3) Membroproliferative glomerulonephritis (1)
134580	Factor XIIIB deficiency (3)
134638	Systemic lupus erythematosus, susceptibility, 152700 (3)
134790	Hyperferritinemia-cataract syndrome, 600886 (3)
134797	Ectopia lentis, ?isolated (3) Marfan syndrome, 154700 (3) Shprintzen-Goldberg syndrome, 182212 (3)
134820	Amyloidosis, hereditary renal, 105200 (3) Dysfibrinogenemia, alpha type, causing bleeding diathesis (3) Dysfibrinogenemia, alpha type, causing recurrent thrombosis (3)
134830	Dysfibrinogenemia, beta type (3)
134850	Dysfibrinogenemia, gamma type (3) Hypofibrinogenemia, gamma type (3)
134934	Achondroplasia, 100800 (3) Craniosynostosis, nonsyndromic (3) Crouzon syndrome with acanthosis nigricans (3) Hypochondroplasia, 146000 (3) Thanatophoric dysplasia, types I and II, 187600 (3)
135300	Fibromatosis, gingival (2)
135600	Ehlers-Danlos syndrome, type X (1) (?)
135700	Fibrosis of extraocular muscles, congenital, 1 (2)
135750	Tetramelic mirror-image polydactyly (2) (?)
135940	Ichthyosis vulgaris, 146700 (1) (?)
136132	[Fish-odor syndrome], 602079 (3)
136350	Pfeiffer syndrome, 101600 (3)
136435	Ovarian dysgenesis, hypergonadotropic, with normal karyotype, 233300 (3)
136440	Lymphoma/leukemia, B-cell, variant (1)
136530	Male infertility, familial (1) (?)
136550	Macular dystrophy, North Carolina type (2)

136836	Fucosyltransferase-6 deficiency (3)
136850	Fumarase deficiency (3)
137181	[Gamma-glutamyltransferase, familial high serum] (2)
137350	Amyloidosis, Finnish type, 105120 (3)
137600	Iridogoniodysgenesis syndrome (2)
138030	[?Hyperproglucagonemia] (1)
138033	Diabetes mellitus, type II (3)
138040	Cortisol resistance (3)
138079	Hyperinsulinism, familial, 602485 (3) MODY, type 2, 125851 (3)
138140	Glucose transport defect, blood-brain barrier (3)
138190	Diabetes mellitus, noninsulin-dependent (3)
138320	Hemolytic anemia due to glutathione peroxidase deficiency (1)
138430	Diabetes mellitus, type II (3)
138491	Hyperekplexia and spastic paraparesis (3) Startle disease, autosomal recessive (3) Startle disease/hyperekplexia, autosomal dominant, 149400 (3)
138570	Non-insulin dependent diabetes mellitus, susceptibility to (2)
138571	Glycogen synthase, liver, deficiency of, 240600 (1)
138700	[Apolipoprotein H deficiency] (3)
138720	Bernard-Soulier syndrome, type B (2)
138850	Hypogonadotropic hypogonadism (3)
138971	Kostmann neutropenia, 202700 (3)
138981	Pulmonary alveolar proteinosis, 265120 (3)
139130	Hypertension, essential, susceptibility to, 145500 (3)
139150	Basal cell carcinoma (3)
139190	Gigantism due to GHRF hypersecretion (1) Isolated growth hormone deficiency due to defect in GHRF (1) (?)
139191	Growth hormone deficient dwarfism (3)
139250	Isolated growth hormone deficiency, Illig type with absent GH and Kowarski type with bioinactive GH (3)
139320	McCune-Albright polyostotic fibrous dysplasia, 174800 (3) Pituitary ACTH secreting adenoma (3) Pseudohypoparathyroidism, type Ia, 103580 (3) Somatotrophinoma (3)
139330	Night blindness, congenital stationary (3)
139350	Epidermolytic hyperkeratosis, 113800 (3) Keratoderma, palmoplantar, nonepidermolytic (3)
139360	Pituitary ACTH-secreting adenoma (3)
140100	[Anhaptoglobinemia] (3) [Hypohaptoglobinemia] (3)
141750	Alpha-thalassemia/mental retardation syndrome, type I (1)
141800	Erythremias, alpha- (3) Heinz body anemias, alpha- (3) Methemoglobinemias, alpha- (3) Thalassemias, alpha- (3)
141850	Erythrocytosis (3) Heinz body anemia (3) Hemoglobin H disease (3) Hypochromic microcytic anemia (3)

	Thalassemia, alpha- (3)
141900	Erythremias, beta- (3) HPFH, deletion type (3) Heinz body anemias, beta- (3) Methemoglobinemias, beta- (3) Sickle cell anemia (3) Thalassemias, beta- (3)
142000	Thalassemia due to Hb Lepore (3) Thalassemia, delta- (3)
142200	HPFH, nondeletion type A (3)
142250	HPFH, nondeletion type G (3)
142270	Hereditary persistence of fetal hemoglobin (3) (?)
142335	Hereditary persistence of fetal hemoglobin, heterocellular, Indian type (2) (?)
142380	Hepatocellular carcinoma (3)
142410	Insulin-dependent diabetes mellitus (3) MODY, type 3, 600496 (3) Non-insulin-dependent diabetes mellitus-2, 601407 (2)
142470	[Hereditary persistence of fetal hemoglobin, heterocellular] (2)
142600	Hemolytic anemia due to hexokinase deficiency (3)
142680	Periodic fever, familial (2)
142857	Pemphigoid, susceptibility to (2)
142858	Beryllium disease, chronic, susceptibility to (3)
142959	Hand-foot-uterus syndrome, 140000 (3)
142989	Synpolydactyly, type II, 186000 (3)
143100	Huntington disease (3)
143200	Erosive vitreoretinopathy (2) Wagner syndrome (2)
143450	Trifunctional protein deficiency, type II (3)
143890	Hypercholesterolemia, familial (3)
144120	Hyperimmunoglobulin G1 syndrome (2) (?)
144200	Epidermolytic palmoplantar keratoderma (3)
144700	Renal cell carcinoma (2)
145001	Hyperparathyroidism-jaw tumor syndrome (2)
145260	Pseudohypoadosteronism, type II (2)
145410	Opitz G syndrome, type II (2)
145505	?Hypertension, essential (1)
145981	Hypocalciuric hypercalcemia, type II (2)
146150	Hypomelanosis of Ito (2) (?)
146200	Hypoparathyroidism, familial (2)
146740	Neutropenia, alloimmune neonatal (3) Viral infections, recurrent (3) Lupus erythematosus, systemic, susceptibility, 152700 (1)
146760	[IgG receptor I, phagocytic, familial deficiency of] (1)
146790	Lupus nephritis, susceptibility to (3)
147020	Agammaglobulinemia, 601495 (3)
147050	Atopy (2)
147061	Allergy and asthma susceptibility (2) (?)
147110	IgG2 deficiency, selective (3)
147141	Leukemia, acute lymphoblastic (1)

147200	[Kappa light chain deficiency] (3)
147440	Growth retardation with deafness and mental retardation (3)
147450	Amyotrophic lateral sclerosis, due to SOD1 deficiency, 105400 (3)
147545	Diabetes mellitus, noninsulin-dependent (3)
147557	Epidermolysis bullosa, junctional, with pyloric atresia, 226730 (3)
147570	Interferon, immune, deficiency (1)
147575	Macrocytic anemia refractory, of 5q- syndrome, 153550 (3) Myelodysplastic syndrome, preleukemic (3) Myelogenous leukemia, acute (3)
147660	Interferon, alpha, deficiency (1)
147670	Diabetes mellitus, insulin-resistant, with acanthosis nigricans (3) Leprechaunism (3) Rabson-Mendenhall syndrome (3)
147680	Severe combined immunodeficiency due to IL2 deficiency (1)
147781	Atopy, susceptibility to (3)
147790	Leukemia, acute lymphocytic, with 4/11 translocation (3) (?)
147791	Jacobsen syndrome (2)
148040	Epidermolysis bullosa simplex, Koebner, Dowling-Meara, and Weber-Cockayne types, 131900, 131760, 131800 (3)
148041	Pachyonychia congenita, Jadassohn-Lewandowsky type, 167200 (3)
148043	Meesmann corneal dystrophy, 122100 (3)
148065	White sponge nevus, 193900 (3)
148066	Epidermolysis bullosa simplex, Koebner, Dowling-Meara, and Weber-Cockayne types, 131900, 131760, 131800 (3) Epidermolysis bullosa simplex, recessive, 601001 (3)
148067	Nonepidermolytic palmoplantar keratoderma, 600962 (3) Pachyonychia congenita, Jadassohn-Lewandowsky type, 167200 (3)
148069	Pachyonychia congenita, Jackson-Lawler type, 167210 (3)
148070	?Liver disease, susceptibility to, from hepatotoxins or viruses (1)
148080	Epidermolytic hyperkeratosis, 113800 (3)
148370	Keratolytic winter erythema (2)
148500	Tylosis with esophageal cancer (2)
148900	Klippel-Feil syndrome with laryngeal malformation (2)
150000	Exertional myoglobinuria due to deficiency of LDH-A (3)
150100	Lactate dehydrogenase-B deficiency (3)
150200	[Placental lactogen deficiency] (1)
150210	Lactoferrin-deficient neutrophils, 245480 (1) (?)
150230	Langer-Giedion syndrome (2)
150240	Cutis laxa, marfanoid neonatal type (1) (?)
150250	Larsen syndrome, autosomal dominant (2)
150270	Laryngeal adductor paralysis (2) (?)
150292	Epidermolysis bullosa, Herlitz junctional type, 226700 (3)
150310	Epidermolysis bullosa, Herlitz junctional type, 226700 (3) Epidermolysis bullosa, generalized atrophic benign, 226650 (3)
151385	Leukemia, acute myeloid (3)
151390	Leukemia, acute T-cell (2)
151400	Leukemia/lymphoma, B-cell, 1 (2)
151430	Leukemia/lymphoma, B-cell, 2 (2)
151440	Leukemia, T-cell acute lymphoblastoid (2)



151670	Hepatic lipase deficiency (3)
152200	Coronary artery disease, susceptibility to (1)
152427	Long QT syndrome-2 (3)
152445	Erythrokeratoderma, progressive symmetric, 602036 (3) Vohwinkel syndrome, 124500 (3)
152760	Hypogonadotropic hypogonadism due to GNRH deficiency, 227200 (1) (?)
152780	Hypogonadism, hypergonadotropic (3) Male pseudohermaphroditism due to defective LH (1) (?)
152790	Leydig cell hypoplasia (3) Precocious puberty, male, 176410 (3)
153455	Cutis laxa, recessive, type I, 219100 (1)
153700	Macular dystrophy, vitelliform type (3)
153880	Macular dystrophy, dominant cystoid (2)
153900	Stargardt disease-2 (2)
154275	Malignant hyperthermia susceptibility 2 (2)
154276	Malignant hyperthermia susceptibility 3 (2)
154500	Treacher Collins mandibulofacial dysostosis (3)
154545	Chronic infections, due to opsonin defect (3)
154550	Carbohydrate-deficient glycoprotein syndrome, type Ib, 602579 (3)
154705	Marfan syndrome, type II (2)
155555	[Red hair/fair skin] (3) UV-induced skin damage, vulnerability to (3)
155600	Malignant melanoma, cutaneous (2)
155900	Melkersson-Rosenthal syndrome (2) (?)
156225	Muscular dystrophy, congenital merosin-deficient (3)
156232	Mesomelic dysplasia, Kantaputra type (2)
156490	Neuroblastoma (3)
156570	Methylcobalamin deficiency, cbl G type (3)
156600	Microcoria, congenital (2)
156845	Tietz syndrome, 103500 (3) Waardenburg syndrome, type IIA, 193510 (3) Waardenburg syndrome/ocular albinism, digenic, 103470 (3)
156850	Cataract, congenital, with microphthalmia (2)
157140	Dementia, frontotemporal, with parkinsonism, 601630 (3)
157147	Abetalipoproteinemia, 200100 (3)
157170	Holoprosencephaly-2 (2)
157640	PEO with mitochondrial DNA deletions, type I (2)
157655	Lactic acidosis due to defect in iron-sulfur cluster of complex I (1)
157900	Moebius syndrome (2) (?)
158590	Spinal muscular atrophy-4 (2)
158900	Facioscapulohumeral muscular dystrophy-1A (2)
159000	Muscular dystrophy, limb-girdle, type 1A (2)
159001	Muscular dystrophy, limb-girdle, type 1B (2)
159350	Colorectal cancer (3)
159440	Charcot-Marie-Tooth neuropathy-1B, 118200 (3) Dejerine-Sottas disease, myelin P(0)-related, 145900 (3) Hypomyelination, congenital (3)
159555	Leukemia, myeloid/lymphoid or mixed-lineage (2)
159595	Leukemia, transient, of Down syndrome (2)

160760	Cardiomyopathy, familial hypertrophic, 1, 192600 (3) Central core disease, one form (3) (?)
160777	Griscelli disease, 214450 (3)
160781	Cardiomyopathy, hypertrophic, mid-left ventricular chamber type (3)
160900	Myotonic dystrophy (3)
160980	Carney myxoma-endocrine complex (2)
161015	Mitochondrial complex I deficiency, 252010 (1) (?)
162100	Neuralgic amyotrophy with predilection for brachial plexus (2)
162150	Obesity with impaired prohormone processing, 600955 (3)
162400	Neuropathy, hereditary sensory and autonomic, type 1 (2)
163729	Hypertension, pregnancy-induced (2)
163890	Parkinson disease, type 1, 601508 (3)
163950	Cardiofaciocutaneous syndrome, 115150 (2) Noonan syndrome-1 (2)
164009	Leukemia, acute promyelocytic, NUPA/RARA type (3)
164040	Leukemia, acute promyelocytic, NPM/RARA type (3)
164050	Nucleoside phosphorylase deficiency, immunodeficiency due to (3)
164160	Obesity, severe, due to leptin deficiency (3)
164200	Oculodentodigital dysplasia (2) Syndactyly, type III, 186100 (2)
164500	Spinocerebellar ataxia-7 (3)
164731	Ovarian carcinoma, 167000 (2)
164761	Hirschsprung disease, 142623 (3) Medullary thyroid carcinoma, 155240 (3) Multiple endocrine neoplasia IIA, 171400 (3) Multiple endocrine neoplasia IIB, 162300 (3)
164770	Myeloid malignancy, predisposition to (3)
164790	Colorectal cancer (3)
164860	Renal cell carcinoma, papillary, familial and sporadic (3)
164920	Mast cell leukemia (3) Mastocytosis with associated hematologic disorder (3) Piebaldism (3)
164953	Liposarcoma (1)
165215	3q21q26 syndrome (1)
165240	Greig cephalopolysyndactyly syndrome, 175700 (3) Pallister-Hall syndrome, 146510 (3) Postaxial polydactyly type A1, 174200 (3)
165320	Hepatocellular carcinoma (1) (?)
166600	Osteopetrosis, AD, type II (2)
166800	Otosclerosis (2)
167000	Ovarian cancer, serous (2)
167250	Paget disease of bone (2) (?)
167409	Optic nerve coloboma with renal disease, 120330 (3)
167415	Hypothyroidism, congenital, due to thyroid dysgenesis or hypoplasia (3)
168000	Paraganglioma, familial nonchromaffin, 1 (2)
168360	Paraneoplastic sensory neuropathy (1)
168450	Hypoparathyroidism, autosomal dominant (3) Hypoparathyroidism, autosomal recessive (3)
168461	Centrocytic lymphoma (2) Multiple myeloma, 254250 (2)

	Parathyroid adenomatosis 1 (2)
168468	Metaphyseal chondrodysplasia, Murk Jansen type, 156400 (3)
168470	Humoral hypercalcemia of malignancy (1) (?)
168500	Parietal foramina (2)
168610	Parkinsonism-dementia with pallidopontonigral degeneration (2)
169600	Hailey-Hailey disease (2)
170261	Bare lymphocyte syndrome, type I, due to TAP2 deficiency (1)
170500	Hyperkalemic periodic paralysis (3) Myotonia congenita, atypical acetazolamide-responsive (3) Paramyotonia congenita, 168300 (3)
170650	Periodontitis, juvenile (2)
170993	Zellweger syndrome-3 (3)
170995	Zellweger syndrome-2 (3)
171050	Colchicine resistance (3)
171060	Cholestasis, progressive familial intrahepatic, type III, 602347 (3)
171190	Hypertension, essential, 145500 (1) (?)
171650	Lysosomal acid phosphatase deficiency (1) (?)
171760	Hypophosphatasia, adult, 146300 (1) (?) Hypophosphatasia, infantile, 241500 (3)
171860	Hemolytic anemia due to phosphofructokinase deficiency (1)
172400	Hemolytic anemia due to glucosephosphate isomerase deficiency (3) Hydrops fetalis, one form (1)
172411	?Colorectal cancer, resistance to (1)
172471	Glycogenosis, hepatic, autosomal (3)
172490	Phosphorylase kinase deficiency of liver and muscle, 261750 (2) (?)
173360	Hemorrhagic diathesis due to PAI1 deficiency (1) Thrombophilia due to excessive plasminogen activator inhibitor (1)
173370	Plasminogen activator deficiency (1)
173470	Glanzmann thrombasthenia, type B (3)
173510	Platelet glycoprotein IV deficiency (3) [Macrothrombocytopenia] (1)
173610	Platelet alpha/delta storage pool deficiency (1)
173850	Polio, susceptibility to (2)
173870	Fanconi anemia (1) (?) Xeroderma pigmentosum (1) (?)
173910	Polycystic kidney disease, adult, type II (3)
174000	Medullary cystic kidney disease, AD (2)
174810	Osteolysis, familial expansile (2)
174900	Polypsis, juvenile intestinal (2)
175100	Adenomatous polyposis coli (3) Adenomatous polyposis coli, attenuated (3) Colorectal cancer (3) Desmoid disease, hereditary, 135290 (3) Gardner syndrome (3) Turcot syndrome, 276300 (3)
176000	Porphyria, acute intermittent (3)
176010	Porphyria, Chester type (2)
176100	Porphyria cutanea tarda (3) Porphyria, hepatoerythropoietic (3)
176260	Episodic ataxia/myokymia syndrome, 160120 (3)

176261	Jervell and Lange-Nielsen syndrome, 220400 (3)
176300	Amyloid neuropathy, familial, several allelic types (3) Amyloidosis, senile systemic (3) Carpal tunnel syndrome, familial (3) [Dystransthyretinemic hyperthyroxinemia](3)
176310	Leukemia, acute pre-B-cell (2)
176450	Sacral agenesis-1 (2)
176640	Creutzfeldt-Jakob disease, 123400 (3) Gerstmann-Straussler disease, 137440 (3) Insomnia, fatal familial (3)
176705	Breast cancer, sporadic (3)
176730	Diabetes mellitus, rare form (1) Hyperproinsulinemia, familial (3) MODY, one form (3)
176797	Leukemia, acute promyelocytic, PL2F/RARA type (3)
176860	Purpura fulminans, neonatal (1) Thrombophilia due to protein C deficiency (3)
176930	Dysprothrombinemia (3) Hypoprothrombinemia (3)
176943	Apert syndrome, 101200 (3) Beare-Stevenson cutis gyrata syndrome, 123790 (3) Crouzon craniofacial dysostosis, 123500 (3) Jackson-Weiss syndrome, 123150 (3) Pfeiffer syndrome, 101600 (3)
176947	Selective T-cell defect (3)
176960	Pituitary tumor, invasive (3)
177000	Protoporphyrria, erythropoietic (3) Protoporphyrria, erythropoietic, recessive, with liver failure (3)
177070	Hermansky-Pudlak syndrome, 203300 (1) (?) Spherocytosis, hereditary, Japanese type (3)
177900	Psoriasis susceptibility-1 (2)
178300	Ptosis, hereditary congenital, 1 (2)
178600	Pulmonary hypertension, familial primary (2)
178640	Pulmonary alveolar proteinosis, congenital, 265120 (3)
179095	Male infertility (1) (?)
179450	Ragweed sensitivity (2) (?)
179605	Butterfly dystrophy, retinal (3) Macular dystrophy (3) Retinitis pigmentosa, digenic (3) Retinitis pigmentosa-7, peripherin-related (3) Retinitis punctata albescens (3)
179615	Reticulosis, familial histiocytic, 267700 (3) Severe combined immunodeficiency, B cell-negative, 601457 (3)
179616	Severe combined immunodeficiency, B cell-negative, 601457 (3)
179755	Renal cell carcinoma, papillary, 1 (2)
179820	[Hyperproreninemia] (3)
180069	Leber congenital amaurosis-2, 204100 (3) Retinal dystrophy, autosomal recessive, childhood-onset (3) Retinitis pigmentosa-20 (3)
180071	Retinitis pigmentosa, autosomal recessive (3)

180072	Night blindness, congenital stationary, type 3, 163500 (3) Retinitis pigmentosa, autosomal recessive (3)
180090	Retinitis pigmentosa, autosomal recessive (3)
180100	Retinitis pigmentosa-1 (2)
180104	Retinitis pigmentosa-9 (2)
180105	Retinitis pigmentosa-10 (2)
180200	Bladder cancer, 109800 (3) Osteosarcoma, 259500 (2) Pinealoma with bilateral retinoblastoma (2) Retinoblastoma (3)
180240	Leukemia, acute promyelocytic (1)
180250	Retinol binding protein, deficiency of (1) (?)
180297	Anemia, hemolytic, Rh-null, suppressor type, 268150 (3)
180380	Night blindness, congenital stationery, rhodopsin-related (3) Retinitis pigmentosa, autosomal recessive (3) Retinitis pigmentosa-4, autosomal dominant (3)
180381	Oguchi disease-2, 258100 (3)
180385	Leukemia, acute T-cell (2)
180721	Retinitis pigmentosa, digenic (3)
180840	Susceptibility to IDDM (1) (?)
180860	Russell-Silver syndrome (2)
180901	Central core disease, 117000 (3) Malignant hyperthermia susceptibility 1, 145600 (3)
181405	Scapuloperoneal spinal muscular atrophy, New England type (2)
181430	Scapuloperoneal syndrome, myopathic type (2)
181460	Schistosoma mansoni, susceptibility/resistance to (2)
181510	Schizophrenia (2) (?)
181600	Sclerolyosis (2) (?)
182138	Anxiety-related personality traits (3)
182280	Small-cell cancer of lung (2)
182290	Smith-Magenis syndrome (2)
182380	Glucose/galactose malabsorption (3)
182381	Renal glucosuria, 253100 (1) (?)
182452	Lung cancer, small cell (3)
182500	Cataract, congenital (2) (?)
182600	Spastic paraplegia-3A (2)
182601	Spastic paraplegia-4 (3)
182860	Elliptocytosis-2 (3) Pyropoikilocytosis (3) Spherocytosis, recessive (3)
182870	Anemia, neonatal hemolytic, fatal and near-fatal (3) Elliptocytosis-3 (3) Spherocytosis-1 (3)
182900	Spherocytosis-2 (3)
183600	Split hand/foot malformation, type 1 (2)
185000	Stomatocytosis I (1) (?)
185430	Atherosclerosis, susceptibility to (3) (?)
185470	Myopathy due to succinate dehydrogenase deficiency (1) (?)
185800	Symphalangism, proximal (2)

186580	Arthrocutaneous granulomatosis (2)
186740	Immunodeficiency due to defect in CD3-gamma (3)
186770	Leukemia, T-cell acute lymphocytic (2)
186780	CD3, zeta chain, deficiency (1)
186830	Immunodeficiency, T-cell receptor/CD3 complex (3)
186855	Leukemia-2, T-cell acute lymphoblastic (3)
186860	Leukemia/lymphoma, T-cell (2)
186880	Leukemia/lymphoma, T-cell (3)
186921	Leukemia, T-cell acute lymphoblastic (2)
186940	[CD4(+) lymphocyte deficiency] (2) Lupus erythematosus, susceptibility to (2)
186960	Leukemia/lymphoma, T-cell (2)
187040	Leukemia-1, T-cell acute lymphoblastic (3)
188025	Thrombocytopenia, Paris-Trousseau type (2) (?)
188040	Thrombophilia due to thrombomodulin defect (3)
188070	Bleeding disorder due to defective thromboxane A2 receptor (3)
188450	Goiter, adolescent multinodular (1) Goiter, nonendemic, simple (3) Hypothyroidism, hereditary congenital (3)
188540	Hypothyroidism, nongoitrous (3)
188550	Thyroid papillary carcinoma (1)
188826	Sorsby fundus dystrophy, 136900 (3)
189800	Preeclampsia/eclampsia (2) (?)
189980	Leukemia, chronic myeloid (3)
190000	Atransferrinemia (1)
190020	Bladder cancer, 109800 (3)
190040	Dermatofibrosarcoma protuberans (3) Giant-cell fibroblastoma (3) Meningioma, SIS-related (3)
190070	Colorectal adenoma (1) Colorectal cancer (1)
190080	Burkitt lymphoma (3)
190100	Geniospasm (2)
190182	Colon cancer (3) Colorectal cancer, familial nonpolyposis, type 6 (3)
190195	Ichthyosiform erythroderma, congenital, 242100 (3) Ichthyosis, lamellar, autosomal recessive, 242300 (3)
190198	Leukemia, T-cell acute lymphoblastic (2)
190300	Tremor, familial essential, 1 (2)
190350	Trichorhinophalangeal syndrome, type 1 (2)
190450	Hemolytic anemia due to triosephosphate isomerase deficiency (3)
190605	Triphalangeal thumb-polysyndactyly syndrome (2)
190685	Down syndrome (1)
190900	Colorblindness, tritan (3)
191010	Cardiomyopathy, familial hypertrophic, 3, 115196 (3)
191030	Nemaline myopathy-1, 161800 (3)
191044	Cardiomyopathy, familial hypertrophic (3)
191045	Cardiomyopathy, familial hypertrophic, 2, 115195 (3)
191092	Tuberous sclerosis-2 (3)

191100	Tuberous sclerosis-1 (3)
191170	Colorectal cancer, 114500 (3) Li-Fraumeni syndrome (3)
191181	Cervical carcinoma (2)
191290	Segawa syndrome, recessive (3)
191315	Insensitivity to pain, congenital, with anhidrosis, 256800 (3)
191540	[Urate oxidase deficiency] (1)
192090	Breast cancer, lobular (3) Endometrial carcinoma (3) Gastric cancer, familial, 137215 (3) Ovarian carcinoma (3)
192340	Diabetes insipidus, neurohypophyseal, 125700 (3)
192500	Jervell and Lange-Nielsen syndrome, 220400 (3) Long QT syndrome-1 (3)
192974	Glycoprotein Ia deficiency (2) (?) Neonatal alloimmune thrombocytopenia (2)
193235	Vitreoretinopathy, neovascular inflammatory (2)
193300	Renal cell carcinoma (3) von Hippel-Lindau syndrome (3)
193500	Craniofacial-deafness-hand syndrome, 122880 (3) Rhabdomyosarcoma, alveolar, 268220 (3) Waardenburg syndrome, type I (3) Waardenburg syndrome, type III, 148820 (3)
194070	Denys-Drash syndrome (3) Frasier syndrome, 136680 (3) Wilms tumor, type 1 (3)
194071	Adrenocortical carcinoma, hereditary, 202300 (2) Wilms tumor, type 2 (2)
194190	Wolf-Hirschhorn syndrome (2)
200150	Choreoacanthocytosis (2)
200350	Acetyl-CoA carboxylase deficiency (1)
200990	Acrocallosal syndrome (2) (?)
201450	Acyl-CoA dehydrogenase, medium chain, deficiency of (3)
201460	Acyl-CoA dehydrogenase, long chain, deficiency of (3)
201470	Acyl-CoA dehydrogenase, short-chain, deficiency of (3)
201475	VLCAD deficiency (3)
201810	3-beta-hydroxysteroid dehydrogenase, type II, deficiency (3)
201910	Adrenal hyperplasia, congenital, due to 21-hydroxylase deficiency (3)
202010	Adrenal hyperplasia, congenital, due to 11-beta-hydroxylase deficiency (3) Aldosteronism, glucocorticoid-remediable (3)
203100	Albinism, oculocutaneous, type 1A (3) Waardenburg syndrome/ocular albinism, digenic, 103470 (3)
203310	Ocular albinism, autosomal recessive (2) (?)
203500	Alkaptonuria (3)
203740	Alpha-ketoglutarate dehydrogenase deficiency (1)
203750	3-ketothiolase deficiency (3)
203800	Alstrom syndrome (2)
204500	Ceroid-lipofuscinosis, neuronal 2, classic late infantile (2)
205100	Amyotrophic lateral sclerosis, juvenile (2)
205900	Anemia, Diamond-Blackfan (2)

207750	Hyperlipoproteinemia, type Ib (3)
207800	Argininemia (3)
208100	Arthrogryposis multiplex congenita, neurogenic (2)
208250	Jacobs syndrome (2)
208400	Aspartylglucosaminuria (3)
208900	Ataxia-telangiectasia (3) B-cell non-Hodgkin lymphoma, sporadic (3) T-cell prolymphocytic leukemia, sporadic (3)
209900	Bardet-Biedl syndrome 2 (2)
209901	Bardet-Biedl syndrome 1 (2)
210900	Bloom syndrome (3)
211420	Breast cancer, ductal (2)
212138	Carnitine-acylcarnitine translocase deficiency (3)
212200	Carnosinemia (2)
213700	Cerebrotendinous xanthomatosis (3)
214300	Klippel-Feil syndrome (2) (?)
214400	Charcot-Marie-Tooth neuropathy-4A (2)
214500	Chediak-Higashi syndrome (3)
215700	Citrullinemia (3)
216550	Cohen syndrome (2)
216900	Achromatopsia (2)
216950	C1r/C1s deficiency, combined (1)
217000	C2 deficiency (3)
217030	C3b inactivator deficiency (3)
217050	C6 deficiency (1) Combined C6/C7 deficiency (1)
217070	C7 deficiency (1)
217800	Macular corneal dystrophy (2)
218000	Andermann syndrome (2)
218030	Apparent mineralocorticoid excess, hypertension due to (3)
219800	Cystinosis, nephropathic (3)
221770	Polycystic lipomembranous osteodysplasia with sclerosing leukencephalopathy (2)
221820	Gliososis, familial progressive subcortical (2)
222100	Diabetes mellitus, insulin-dependent-1 (2) (?)
222600	Achondrogenesis Ib, 600972 (3) Atelosteogenesis II, 256050 (3) Diastrophic dysplasia (3)
222700	Lysinuric protein intolerance (2)
222745	DECR deficiency (2) (?)
222800	Hemolytic anemia due to bisphosphoglycerate mutase deficiency (1)
222900	Sucrose intolerance (3)
223000	Lactase deficiency, adult, 223100 (1) (?) Lactase deficiency, congenital (1) (?)
223360	Dopamine-beta-hydroxylase deficiency (1)
223900	Dysautonomia, familial (2)
224100	Congenital dyserythropoietic anemia II (2)
224120	Dyserythropoietic anemia, congenital, type I (2)
225500	Ellis-van Creveld syndrome (2)



226450	Epidermolysis bullosa inversa, junctional (2)
227220	[Eye color, brown] (2)
227400	Hemorrhagic diathesis due to factor V deficiency (1) Thromboembolism susceptibility due to factor V Leiden (3)
227500	Factor VII deficiency (3)
227600	Factor X deficiency (3)
227645	Fanconi anemia, type C (3)
227646	Fanconi anemia, type D (2)
227650	Fanconi anemia, type A (3)
229000	Fletcher factor deficiency (1)
229300	Friedreich ataxia (3) Friedreich ataxia with retained reflexes (2)
229600	Fructose intolerance (3)
229700	Fructose-bisphosphatase deficiency (1)
230000	Fucosidosis (3)
230200	Galactokinase deficiency with cataracts (3)
230350	Galactose epimerase deficiency (3)
230450	Hemolytic anemia due to gamma-glutamylcysteine synthetase deficiency (1)
230500	GM1-gangliosidosis (3) Mucopolysaccharidosis IVB (3)
230800	Gaucher disease (3) Gaucher disease with cardiovascular calcification (3)
231200	Bernard-Soulier syndrome (3)
231550	Achalasia-addisonianism-alacrimia syndrome (2)
231670	Glutaricaciduria, type I (3)
231675	Glutaricaciduria, type IIC (3)
231680	Glutaricaciduria, type IIA (1)
231950	Glutathioninuria (1)
232000	Propionicacidemia, type I or pccA type (1)
232050	Propionicacidemia, type II or pccB type (3)
232200	Glycogen storage disease I (3)
232400	Glycogen storage disease IIIa (1) Glycogen storage disease IIIfb (3)
232600	McArdle disease (3)
232700	Glycogen storage disease VI (3)
232800	Glycogen storage disease VII (3)
233100	[Renal glucosuria] (2)
233690	Chronic granulomatous disease, autosomal, due to deficiency of CYBA (3)
233700	Chronic granulomatous disease due to deficiency of NCF-1 (3)
233710	Chronic granulomatous disease due to deficiency of NCF-2 (1)
234000	Factor XII deficiency (3)
234200	Neurodegeneration with brain iron accumulation (2)
235200	Hemochromatosis (3)
235800	[Histidinemia] (1)
236100	Holoprosencephaly-1 (2)
236200	Homocystinuria, B6-responsive and nonresponsive types (3)
236700	McKusick-Kaufman syndrome (2)
236730	Urofacial syndrome (2)

237300	Carbamoylphosphate synthetase I deficiency (3)
238300	Hyperglycinemia, nonketotic, type I (3)
238310	Hyperglycinemia, nonketotic, type II (1)
238600	Chylomicronemia syndrome, familial (3) Combined hyperlipemia, familial (3) Hyperlipoproteinemia I (1) Lipoprotein lipase deficiency (3)
238970	HHH syndrome (2) (?)
239500	Hyperprolinemia, type I (1)
240300	Autoimmune polyglandular disease, type I (3)
243500	Isovalericacidemia (3)
245000	Papillon-Lefevre syndrome (2)
245050	Ketoacidosis due to SCOT deficiency (3)
245200	Krabbe disease (3)
245349	Lacticacidemia due to PDX1 deficiency (3)
245900	Fish-eye disease (3) Norum disease (3)
246450	HMG-CoA lyase deficiency (3)
246530	Leukotriene C4 synthase deficiency (1)
246900	Lipoamide dehydrogenase deficiency (3)
247200	Miller-Dieker lissencephaly syndrome (2)
247640	Leukemia, acute lymphoblastic (2)
248510	Mannosidosis, beta- (3)
248600	Maple syrup urine disease, type Ia (3)
248610	Maple syrup urine disease, type II (3)
248611	Maple syrup urine disease, type Ib (3)
249000	Meckel syndrome (2)
249270	Thiamine-responsive megaloblastic anemia (2)
250100	Metachromatic leukodystrophy (3)
250800	Methemoglobinemia, type I (3) Methemoglobinemia, type II (3)
250850	Hypermethioninemia, persistent, autosomal dominant, due to methionine adenosyltransferase I/III deficiency (3)
251000	Methylmalonicaciduria, mutase deficiency type (3)
251170	Mevalonicaciduria (3)
252500	Mucopolipidosis II (1) Mucopolipidosis III (1)
252800	Mucopolysaccharidosis Ih (3) Mucopolysaccharidosis Ih/s (3) Mucopolysaccharidosis Is (3)
252920	Sanfilippo syndrome, type B (3)
252940	Sanfilippo syndrome, type D (1)
253000	Mucopolysaccharidosis IVA (3)
253200	Maroteaux-Lamy syndrome, several forms (3)
253220	Mucopolysaccharidosis VII (3)
253250	Mulibrey nanism (2)
253260	Biotinidase deficiency (3)
253270	Multiple carboxylase deficiency, biotin-responsive (3)
253601	Miyoshi myopathy, 254130 (2)

	Muscular dystrophy, limb-girdle, type 2B (2)
253700	Muscular dystrophy, limb-girdle, type 2C (3)
253800	Fukuyama type congenital muscular dystrophy (2) Walker-Warburg syndrome, 236670 (2) (?)
254210	Myasthenia gravis, familial infantile (2)
254770	Epilepsy, juvenile myoclonic (2)
255800	Schwartz-Jampel syndrome (2)
256030	Nemaline myopathy-2 (2)
256100	Nephronophthisis, juvenile (3)
256540	Galactosialidosis (3)
256550	Sialidosis, type I (3) Sialidosis, type II (3)
256731	Ceroid-lipofuscinosis, neuronal-5, variant late infantile (3)
257200	Niemann-Pick disease, type A (3) Niemann-Pick disease, type B (3)
257220	Niemann-Pick disease, type C (3) Niemann-Pick disease, type D, 257250 (2)
258501	3-methylglutaconicaciduria, type III (2)
258870	Gyrate atrophy of choroid and retina with ornithinemia, B6 responsive or unresponsive (3)
258900	Oroticaciduria (3)
259700	Osteopetrosis, recessive (2)
259730	Renal tubular acidosis-osteopetrosis syndrome (3)
259770	Osteoporosis-pseudoglioma syndrome (2)
259900	Hyperoxaluria, primary, type 1 (3)
261510	Pseudo-Zellweger syndrome (1)
261600	Phenylketonuria (3) [Hyperphenylalaninemia, mild] (3)
261640	Phenylketonuria due to PTS deficiency (3)
261670	Myopathy due to phosphoglycerate mutase deficiency (3)
262000	Bjornstad syndrome (2)
262850	Plasmin inhibitor deficiency (3)
263200	Polycystic kidney disease, autosomal recessive (2)
263700	Porphyria, congenital erythropoietic (3)
264300	Pseudohermaphroditism, male, with gynecomastia (3)
264470	Adrenoleukodystrophy, pseudoneonatal (2)
264600	Pseudovaginal perineoscrotal hypospadias (3)
264700	Pseudo-vitamin D dependency rickets 1 (2)
264900	Factor XI deficiency (3)
266100	Pyridoxine dependency with seizures (1) (?)
266150	Pyruvate carboxylase deficiency (3)
266200	Anemia, hemolytic, due to PK deficiency (3)
266300	[Hair color, red] (2)
266600	Inflammatory bowel disease-1 (2)
267750	Knobloch syndrome (2)
268800	Sandhoff disease, infantile, juvenile, and adult forms (3) Spinal muscular atrophy, HEXB-related (3)
268900	[Sarcosinemia] (2)
269920	Salla disease (2)

270200	Sjogren-Larsson syndrome (3)
270800	Spastic paraplegia-5A (2)
271245	Spinocerebellar ataxia-8, infantile, with sensory neuropathy (2)
271900	Canavan disease (3)
272750	GM2-gangliosidosis, AB variant (3)
272800	GM2-gangliosidosis, juvenile, adult (3) Tay-Sachs disease (3) [Hex A pseudodeficiency] (1)
273300	Male germ cell tumor (2)
273800	Glanzmann thrombasthenia, type A (3) Thrombocytopenia, neonatal alloimmune (1)
274180	Thromboxane synthase deficiency (2)
274270	Thymine-uraciluria (1) Fluorouracil toxicity, sensitivity to (1)
274500	Goiter, congenital (3) Hypothyroidism, congenital (3) Thyroid iodine peroxidase deficiency (1)
274600	Deafness, autosomal recessive 4 (3) Pendred syndrome (3)
275200	Graves disease, 275000 (1) Hyperthyroidism, congenital (3) Hypothyroidism, nongoitrous, due to TSH resistance (3) Thyroid adenoma, hyperfunctioning (3)
275350	Transcobalamin II deficiency (3)
276000	Pancreatitis, hereditary, 167800 (3) Trypsinogen deficiency (1)
276600	Tyrosinemia, type II (3)
276700	Tyrosinemia, type I (3)
276710	Tyrosinemia, type III (1)
276901	Usher syndrome, type 2 (3)
276902	Usher syndrome, type 3 (2)
276903	Deafness, autosomal dominant 11, neurosensory, 601317 (3) Deafness, autosomal recessive 2, neurosensory, 600060 (3) Usher syndrome, type 1B (3)
276904	Usher syndrome, type 1C (2)
277700	Werner syndrome (3)
277730	Wernicke-Korsakoff syndrome, susceptibility to (1)
277900	Wilson disease (3)
278000	Cholesteryl ester storage disease (3) Wolman disease (3)
278250	Wrinkly skin syndrome (2)
278300	Xanthinuria, type I (3)
278700	Xeroderma pigmentosum, group A (3)
278720	Xeroderma pigmentosum, group C (3)
278760	Xeroderma pigmentosum, group F (3)
300011	Cutis laxa, neonatal (3) Menkes disease, 309400 (3) Occipital horn syndrome, 304150 (3)
300029	Retinitis pigmentosa-15 (2)
300031	Mental retardation, X-linked, FRAXF type (3)

300032	Alpha-thalassemia/mental retardation syndrome, type 2, 301040 (3) Juberg-Marsidi syndrome, 309590 (3)
300044	?Wernicke-Korsakoff syndrome, susceptibility to (1)
300046	Mental retardation, X-linked 23, nonspecific (2)
300047	Mental retardation, X-linked 20 (2)
300048	Intestinal pseudoobstruction, neuronal, X-linked (2)
300049	BPNH/MR syndrome (2) Nodular heterotopia, bilateral periventricular (2)
300055	Mental retardation with psychosis, pyramidal signs, and macroorchidism (2)
300071	Night blindness, congenital stationary, type 2 (2)
300075	Coffin-Lowry syndrome, 303600 (3)
300077	Mental retardation, X-linked 29 (2)
300085	Cone dystrophy, progressive X-linked, 2 (2)
300088	Epilepsy, female restricted, with mental retardation (2)
300100	Adrenoleukodystrophy (3) Adrenomyeloneuropathy (3)
300104	Mental retardation, X-linked nonspecific, 309541 (3)
300110	Night blindness, congenital stationary, X-linked incomplete, 300071 (3)
300123	Mental retardation with isolated growth hormone deficiency (2)
300126	Dyskeratosis congenita-1, 305000 (3)
300300	Agammaglobulinemia, type 1, X-linked (3) XLA and isolated growth hormone deficiency, 307200 (3) (?)
300600	Ocular albinism, Forsius-Eriksson type (2)
300700	Albinism-deafness syndrome (2)
301000	Thrombocytopenia, X-linked, 313900 (3) Wiskott-Aldrich syndrome (3)
301200	Amelogenesis imperfecta (3)
301201	Amelogenesis imperfecta-3, hypoplastic type (2) (?)
301300	Anemia, sideroblastic/hypochromic (3)
301310	Anemia, sideroblastic, with spinocerebellar ataxia (2) (?)
301500	Fabry disease (3)
301590	Anophthalmos-1 (2) (?)
301830	Arthrogryposis, X-linked (spinal muscular atrophy, infantile, X-linked) (2)
301835	Arts syndrome (2)
301845	Bazex syndrome (2)
301900	Borjeson-Forssman-Lehmann syndrome (2)
302060	Barth syndrome (3) Cardiomyopathy, X-linked dilated, 300069 (3) Endocardial fibroelastosis-2 (2) Noncompaction of left ventricular myocardium, isolated (3)
302350	Nance-Horan syndrome (2)
302801	Charcot-Marie-Tooth neuropathy, X-linked-2, recessive (2)
302960	Chondrodysplasia punctata, X-linked dominant (2)
303400	Cleft palate, X-linked (2)
303630	Alport syndrome, 301050 (3) Leiomyomatosis-nephropathy syndrome, 308940 (1)
303631	Leiomyomatosis, diffuse, with Alport syndrome (3)
303700	Colorblindness, blue monochromatic (3)

303800	Colorblindness, deutan (3)
303900	Colorblindness, protan (3)
304040	Charcot-Marie-Tooth neuropathy, X-linked-1, dominant, 302800 (3)
304340	Mental retardation, X-linked, syndromic-5, with Dandy-Walker malformation, basal ganglia disease, and seizures (2)
304500	Deafness, X-linked 2, perceptive congenital (2)
304700	Deafness, X-linked 1, progressive (3) Jensen syndrome, 311150 (3) Mohr-Tranebjaerg syndrome (3)
304800	Diabetes insipidus, nephrogenic (3)
305100	Anhidrotic ectodermal dysplasia (2)
305400	Aarskog-Scott syndrome (3)
305435	Heterocellular hereditary persistence of fetal hemoglobin, Swiss type (2)
305450	FG syndrome (2)
305900	Favism (3) G6PD deficiency (3) Hemolytic anemia due to G6PD deficiency (3)
306000	Glycogenosis, X-linked hepatic, type I (3) Glycogenosis, X-linked hepatic, type II (3)
306100	Gonadal dysgenesis, XY female type (2)
306250	Leukemia, acute myeloid, M2 type (1)
306700	Hemophilia A (3)
306900	Hemophilia B (3)
306955	Heterotaxy, X-linked visceral (3)
306995	[?Homosexuality, male] (2)
307150	Hypertrichosis, congenital generalized (2)
307700	Hypoparathyroidism, X-linked (2)
307800	Hypophosphatemia, hereditary (3)
308000	HPRT-related gout (3) Lesch-Nyhan syndrome (3)
308100	Ichthyosis, X-linked (3) Placental steroid sulfatase deficiency (3)
308240	Lymphoproliferative syndrome, X-linked (2)
308300	Incontinentia pigmenti, sporadic type (2)
308310	Incontinentia pigmenti, familial (2)
308380	Combined immunodeficiency, X-linked, moderate, 312863 (3) Severe combined immunodeficiency, X-linked, 300400 (3)
308800	Keratosis follicularis spinulosa decalvans (2)
308840	Hydrocephalus due to aqueductal stenosis, 307000 (3) MASA syndrome, 303350 (3) Spastic paraplegia, 312900 (3)
309000	Lowe syndrome (3)
309200	Manic-depressive illness, X-linked (2) (?)
309300	Megalocornea, X-linked (2)
309470	Mental retardation, X-linked, syndromic-3, with spastic diplegia (2)
309500	Renpenning syndrome-1 (2)
309510	Mental retardation, X-linked, syndromic-1, with dystonic movements, ataxia, and seizures (2)
309548	Mental retardation, X-linked, FRAXE type (3)
309605	Mental retardation, X-linked, syndromic-4, with congenital contractures

	and low fingertip arches (2)
309610	Mental retardation, X-linked, syndromic-2, with dysmorphism and cerebral atrophy (2)
309620	Mental retardation-skeletal dysplasia (2)
309850	Brunner syndrome (3)
309900	Mucopolysaccharidosis II (3)
310300	Emery-Dreifuss muscular dystrophy (3)
310400	Myotubular myopathy, X-linked (3)
310460	Bornholm eye disease (2) Myopia-1 (2)
310490	Cowchock syndrome (2)
311050	Optic atrophy, X-linked (2)
311200	Oral-facial-digital syndrome 1 (2)
311300	Otopalatodigital syndrome, type I (2)
311510	Waisman parkinsonism-mental retardation syndrome (2)
311770	Paroxysmal nocturnal hemoglobinuria (3)
311800	Hemolytic anemia due to PGK deficiency (3) Myoglobinuria/hemolysis due to PGK deficiency (3)
311850	Phosphoribosyl pyrophosphate synthetase-related gout (3)
311870	Muscle glycogenosis (3)
312000	Panhypopituitarism, X-linked (2)
312040	N syndrome, 310465 (1) (?)
312060	Properdin deficiency, X-linked (3)
312080	Pelizaeus-Merzbacher disease (3) Spastic paraplegia-2, 312920 (3)
312170	Pyruvate dehydrogenase deficiency (3)
312700	Retinoschisis (3)
312760	Turner syndrome (1)
312865	Langer mesomelic dysplasia, 249700 (3) Leri-Weill dyschondrosteosis, 127300 (3) Short stature, idiopathic familial (3)
313400	Spondyloepiphyseal dysplasia tarda (2)
313850	Thoracoabdominal syndrome (2)
314250	Dystonia-3, torsion, with parkinsonism, Filipino type (2)
314300	Goeminne TKCR syndrome (2)
314400	Cardiac valvular dysplasia-1 (2)
314580	Wieacker-Wolff syndrome (2)
600020	Prostate cancer, 176807 (3)
600040	Colorectal cancer (3)
600045	Xeroderma pigmentosum, group E, subtype 2 (1)
600048	Breast cancer-3 (2)
600049	Myelodysplasia syndrome-1 (3)
600059	Retinitis pigmentosa-13 (2)
600065	Leukocyte adhesion deficiency, 116920 (3)
600079	Colon cancer (3)
600095	Split hand/foot malformation, type 3 (2)
600101	Deafness, autosomal dominant 2 (2)
600105	Retinitis pigmentosa-12, autosomal recessive (2)
600119	Adhalinopathy, primary (1)

	Muscular dystrophy, Duchenne-like, type 2 (3)
600138	Retinitis pigmentosa-11 (2)
600140	Rubenstein-Taybi syndrome, 180849 (3)
600143	Epilepsy, progressive, with mental retardation (2)
600160	Melanoma, 155601 (3)
600163	Long QT syndrome-3 (3)
600173	SCID, autosomal recessive, T-negative/B-positive type (3)
600175	Spinal muscular atrophy, congenital nonprogressive, of lower limbs (2)
600179	Leber congenital amaurosis, type I, 204000 (3)
600184	Carnitine acetyltransferase deficiency (1) (?)
600185	Breast cancer 2, early onset (3) Pancreatic cancer (3)
600192	Sarcoma, synovial (1)
600194	Ichthyosis bullosa of Siemens, 146800 (3)
600202	Dyslexia, specific, 2 (2)
600211	Cleidocranial dysplasia, 119600 (3)
600221	Venous malformations, multiple cutaneous and mucosal, 600195 (3)
600223	Spinocerebellar ataxia-4 (2)
600228	Pseudohypoaldosteronism, type I, 264350 (3)
600231	Palmoplantar keratoderma, Bothnia type (2)
600234	HMG-CoA synthase-2 deficiency (1)
600243	Temperature-sensitive apoptosis (1)
600258	Colorectal cancer, hereditary nonpolyposis, type 3 (3)
600261	Ehlers-Danlos-like syndrome (3)
600266	Resistance/susceptibility to TB, etc. (1) (?)
600273	Polycystic kidney disease, infantile severe, with tuberous sclerosis (3)
600276	Cerebral arteriopathy with subcortical infarcts and leukoencephalopathy, 125310 (3)
600281	MODY, type 1, 125850 (3) Non-insulin-dependent diabetes mellitus, 125853 (3)
600309	Atrioventricular canal defect-1 (2)
600310	Epiphyseal dysplasia, multiple 1, 132400 (3) Pseudoachondroplasia, 177170 (3)
600318	Diabetes mellitus, insulin-dependent, 3 (2)
600319	Diabetes mellitus, insulin-dependent, 4 (2)
600320	Insulin-dependent diabetes mellitus-5 (2)
600321	Diabetes mellitus, insulin-dependent, 7 (2)
600332	Rippling muscle disease-1 (2)
600354	Spinal muscular atrophy-1, 253300 (3) Spinal muscular atrophy-2, 253550 (3) Spinal muscular atrophy-3, 253400 (3)
600359	Bartter syndrome, type 2 (3)
600364	Cone dystrophy-3, 602093 (3)
600374	Bardet-Biedl syndrome 4 (2)
600414	Adrenoleukodystrophy, neonatal, 202370 (3)
600415	Ataxia with isolated vitamin E deficiency, 277460 (3)
600429	[Ii blood group, 110800] (1)
600430	Brachydactyly-mental retardation syndrome (2)
600467	Malignant hyperthermia susceptibility 4 (2)



600509	Persistent hyperinsulinemic hypoglycemia of infancy, 256450 (3)
600510	Pigment dispersion syndrome (2)
600512	Epilepsy, partial (2)
600525	Trichodontoosseous syndrome, 190320 (3)
600528	CPT deficiency, hepatic, type I, 255120 (1)
600536	Myopathy, congenital (3)
600542	Chondrosarcoma, extraskeletal myxoid (1)
600584	Atrial septal defect with atrioventricular conduction defects, 108900 (3)
600593	Craniosynostosis, Adelaide type (2)
600617	Lipoid adrenal hyperplasia, 201710 (3)
600618	Leukemia, acute lymphoblastic (1)
600623	Prostate cancer, 176807 (2)
600624	Cone-rod retinal dystrophy-1 (2)
600631	Enuresis, nocturnal, 1 (2)
600635	Goiter, familial, due to TTF-1 defect (1)
600650	CPT deficiency, hepatic, type II, 600649 (3) Myopathy due to CPT II deficiency, 255110 (3)
600652	Deafness, autosomal dominant 4 (2)
600678	Cancer susceptibility (3)
600698	Lipoma (3) Lipomatosis, multiple, 151900 (2) (?) Salivary adenoma (3) Uterine leiomyoma (3)
600701	Lipoma (1) (?)
600722	Ceroid lipofuscinosis, neuronal, variant juvenile type, with granular osmiophilic deposits (3) Ceroid lipofuscinosis, neuronal-1, infantile, 256730 (3)
600725	Holoprosencephaly-3, 142945 (3)
600757	Orofacial cleft-3 (2)
600759	Alzheimer disease-4 (3)
600760	Liddle syndrome, 177200 (3) Pseudohypoaldosteronism, type I, 264350 (3)
600761	Liddle syndrome, 177200 (3) Pseudohypoaldosteronism, type I, 264350 (3)
600792	Deafness, autosomal recessive 5 (2)
600805	Epidermolysis bullosa, junctional, Herlitz type (3)
600807	Bronchial asthma (2)
600808	Enuresis, nocturnal, 2 (2)
600811	Xeroderma pigmentosum, group E, DDB-negative subtype, 278740 (3)
600835	AIDS, resistance to (3)
600837	Hirschsprung disease, 142623 (3)
600839	Bartter syndrome, 241200 (3)
600850	Schizophrenia disorder-4 (2)
600852	Retinitis pigmentosa-17 (2)
600856	Beckwith-Wiedemann syndrome, 130650 (3)
600857	Leigh syndrome (3)
600881	Cataract, congenital, zonular, with sutural opacities (2)
600882	Charcot-Marie-Tooth neuropathy-2B (2)
600883	Diabetes mellitus, insulin-dependent, 8 (2)

600884	Cardiomyopathy, familial dilated 1B (2)
600887	Endometrial carcinoma (3)
600890	LCHAD deficiency (3) Mitochondrial trifunctional protein deficiency (1)
600897	Cataract, zonular pulverulent-1, 116200 (3)
600899	Severe combined immunodeficiency, type I, 202500 (1) (?)
600900	Muscular dystrophy, limb-girdle, type 2E (3)
600918	Cystinuria, type III (2)
600919	Long QT syndrome-4 with sinus bradycardia (2)
600923	Porphyria variegata, 176200 (3)
600937	Persistent hyperinsulinemic hypoglycemia of infancy, 256450 (3)
600946	Laron dwarfism, 262500 (3) Short stature, autosomal dominant, with normal serum growth hormone binding protein (3) Short stature, idiopathic (3)
600956	Persistent Mullerian duct syndrome, type II, 261550 (3)
600957	Persistent Mullerian duct syndrome, type I, 261550 (3)
600958	Cardiomyopathy, familial hypertrophic, 4, 115197 (3)
600964	Refsum disease, adult, with increased pipecolicacidemia (2)
600965	Deafness, autosomal dominant 6 (2)
600968	Gitelman syndrome, 263800 (3)
600971	Deafness, autosomal recessive 6 (2)
600974	Deafness, autosomal recessive 7 (2)
600975	Glaucoma 3, primary infantile, B (2)
600977	Cone dystrophy, progressive (2)
600983	Pseudohypoaldosteronism type I, autosomal dominant, 177735 (3)
600993	Pancreatic cancer (3)
600994	Deafness, autosomal dominant 5 (2)
600995	Nephrotic syndrome, idiopathic, steroid-resistant (2)
600996	Arrhythmogenic right ventricular dysplasia-2 (2)
600998	Bleeding diathesis due to GNAQ deficiency (1)
601002	5-oxoprolinuria, 266130 (3) Hemolytic anemia due to glutathione synthetase deficiency, 231900 (3)
601011	Cerebellar ataxia, pure (3) Episodic ataxia, type 2, 108500 (3) Hemiplegic migraine, familial, 141500 (3) Spinocerebellar ataxia-6, 183086 (3)
601071	Deafness, autosomal recessive 9 (2)
601072	Deafness, autosomal recessive 8 (2)
601097	Charcot-Marie-Tooth neuropathy-1A, 118220 (3) Dejerine-Sottas disease, PMP22 related, 145900 (3) Neuropathy, recurrent, with pressure palsies, 162500 (3)
601105	Pycnodysostosis, 265800 (3)
601107	Dubin-Johnson syndrome, 237500 (3)
601130	Tolbutamide poor metabolizer (3)
601145	Epilepsy, progressive myoclonic 1, 254800 (3)
601146	Acromesomelic dysplasia, Hunter-Thompson type, 201250 (3) Brachydactyly, type C, 113100 (3) Chondrodysplasia, Grebe type, 200700 (3)
601154	Cardiomyopathy, dilated, 1E (2)

601199	Hypocalcemia, autosomal dominant, 601198 (3) Hypocalciuric hypercalcemia, type I, 145980 (3) Neonatal hyperparathyroidism, 239200 (3)
601202	Cataract, anterior polar-2 (2)
601208	Insulin-dependent diabetes mellitus-11 (2)
601226	Progressive external ophthalmoplegia, type 2 (2)
601238	Cerebellar ataxia, Cayman type (2)
601253	Muscular dystrophy, limb-girdle, type IC (3)
601267	HIV infection, susceptibility/resistance to (3)
601277	Ichthyosis, lamellar, type 2 (2)
601284	Hereditary hemorrhagic telangiectasia-2, 600376 (3)
601295	Bile acid malabsorption, primary (3)
601309	Basal cell carcinoma, sporadic (3) Basal cell nevus syndrome, 109400 (3)
601313	Polycystic kidney disease, adult type I, 173900 (3)
601316	Deafness, autosomal dominant 10 (2)
601318	Diabetes mellitus, insulin-dependent, 13 (2)
601362	DiGeorge syndrome/velocardiofacial syndrome complex-2 (2)
601363	Wilms tumor, type 4 (2)
601369	Deafness, autosomal dominant 9 (2)
601373	HIV infection, susceptibility/resistance to (3)
601382	Charcot-Marie-Tooth neuropathy-4B (2)
601385	Prostate cancer (1) (?)
601386	Deafness, autosomal recessive 12 (2)
601387	Breast cancer (3)
601399	Platelet disorder, familial, with associated myeloid malignancy (2)
601406	B-cell non-Hodgkin lymphoma, high-grade (3)
601410	Diabetes mellitus, transient neonatal (2)
601411	Muscular dystrophy, limb-girdle, type 2F, 601287 (3)
601412	Deafness, autosomal dominant 7 (2)
601414	Retinitis pigmentosa-18 (2)
601471	Moebius syndrome-2 (2)
601472	Charcot-Marie-Tooth neuropathy-2D (2)
601493	Cardiomyopathy, dilated 1C (2)
601494	Cardiomyopathy, familial, dilated-2 (2)
601498	Peroxisomal biogenesis disorder, complementation group 4 (3)
601499	Rieger syndrome, type 2 (2)
601517	Spinocerebellar ataxia-2, 183090 (3)
601518	Prostate cancer, hereditary, 1, 176807 (2)
601542	Rieger syndrome, type 1, 180500 (3)
601545	Lissencephaly-1 (3)
601567	Combined factor V and VIII deficiency, 227300 (3)
601596	Charcot-Marie-Tooth neuropathy, demyelinating (2)
601604	Mycobacterial and salmonella infections, susceptibility to (3)
601606	Trichoepithelioma, multiple familial (2)
601620	Holt-Oram syndrome, 142900 (3)
601621	Ulnar-mammary syndrome, 181450 (3)
601622	Saethre-Chotzen syndrome, 101400 (3)
601623	Angelman syndrome (3)

601649	Blepharophimosis, epicanthus inversus, and ptosis, type 2 (2)
601650	Paraganglioma, familial nonchromaffin, 2 (2)
601652	Glaucoma 1A, primary open angle, juvenile-onset, 137750 (3)
601653	Branchiootic syndrome (3) Branchiootorenal syndrome, 113650 (3)
601666	Insulin-dependent diabetes mellitus-15 (2)
601669	Hirschsprung disease, one form (2) (?)
601676	Acute insulin response (2)
601680	Distal arthrogryposis, type 2B (2)
601682	Glaucoma 1C, primary open angle (2)
601687	Meesmann corneal dystrophy, 122100 (3)
601690	Platelet-activating factor acetylhydrolase deficiency (3)
601691	Cone-rod dystrophy 3 (3) Fundus flavimaculatus with macular dystrophy, 248200 (3) Retinitis pigmentosa-19, 601718 (3) Stargardt disease-1, 248200 (3)
601692	Corneal dystrophy, Avellino type (3) Corneal dystrophy, Groenouw type I, 121900 (3) Corneal dystrophy, lattice type I, 122200 (3) Reis-Bucklers corneal dystrophy (3)
601718	Retinitis pigmentosa-19 (2)
601744	Systemic lupus erythematosus, susceptibility to, 1 (2)
601757	Rhizomelic chondrodysplasia punctata, type 1, 215100 (3)
601768	Leukemia, acute myeloid (3)
601769	Osteoporosis, involutional (1) (?) Rickets, vitamin D-resistant, 277440 (3)
601771	Glaucoma 3A, primary infantile, 231300 (3)
601777	Cone dystrophy, progressive (2)
601780	Ceroid-lipofuscinosis, neuronal-6, variant late infantile (2)
601785	Carbohydrate-deficient glycoprotein syndrome, type I, 212065 (3)
601800	[Hair color, brown] (2)
601841	Protein C inhibitor deficiency (2)
601843	Hypothyroidism, congenital, 274400 (3)
601844	Pseudohypoaldosteronism type II (2)
601846	Muscular dystrophy with rimmed vacuoles (2)
601847	Progressive intrahepatic cholestasis-2 (2)
601850	Retinitis pigmentosa-deafness syndrome (2)
601863	Bare lymphocyte syndrome, complementation group C (1)
601868	Deafness, autosomal dominant 13 (2)
601884	[High bone mass] (2)
601885	Cataract, zonular pulverulent-2 (2)
601889	Lymphoma, diffuse large cell (3)
601916	Pancreatic cancer (2)
601920	Alagille syndrome, 118450 (3)
601928	Monilethrix, 158000 (3)
601941	Insulin-dependent diabetes mellitus-6 (2)
601954	Muscular dystrophy, limb-girdle, type 2G (2)
601969	Glioblastoma multiforme, 137800 (3) Medulloblastoma, 155255 (3)

601975	Ectodermal dysplasia/skin fragility syndrome (3)
601990	Neuroblastoma (1) (?)
602011	Pancreatic endocrine tumors (1) (?)
602014	Hypomagnesemia with secondary hypocalcemia (2)
602023	Bartter syndrome, type 3 (3)
602025	Obesity/hyperinsulinism, susceptibility to (2)
602026	Refsum disease, 266500 (3)
602066	Convulsions, infantile and paroxysmal choreoathetosis (2)
602067	Cardiomyopathy, dilated, 1F (2)
602078	Fibrosis of extraocular muscles, congenital, 2 (2)
602080	Paget disease of bone-2 (2)
602081	Speech-language disorder-1 (2)
602082	Corneal dystrophy, Thiel-Behnke type (2)
602084	Endometrial carcinoma (2)
602085	Postaxial polydactyly, type A2 (2)
602086	Arrhythmogenic right ventricular dysplasia-3 (2)
602087	Arrhythmogenic right ventricular dysplasia-4 (2)
602088	Nephronophthisis, infantile (2)
602089	Hemangioma, capillary, hereditary (2)
602091	Marfan syndrome, atypical (3)
602092	Deafness, autosomal recessive 18 (2)
602094	Lipodystrophy, familial partial (2)
602096	Alzheimer disease-5 (2)
602099	Amyotrophic lateral sclerosis-5 (2)
602116	Glioma (1)
602117	Prader-Willi syndrome (1) (?)
602121	Deafness, autosomal dominant nonsyndromic sensorineural, 1, 124900 (3)
602134	Tremor, familial essential, 2 (2)
602136	Adrenoleukodystrophy, neonatal, 202370 (3) Refsum disease, infantile, 266510 (3) Zellweger syndrome-1, 214100 (3)
602153	Monilethrix, 158000 (3)
602216	Peutz-Jeghers syndrome, 175200 (3)
602218	Townes-Brocks syndrome, 107480 (3)
602221	Stem-cell leukemia/lymphoma syndrome (3)
602225	Cone-rod retinal dystrophy-2, 120970 (3) Leber congenital amaurosis, type III (3)
602235	Epilepsy, benign, neonatal, type 1, 121200 (3)
602279	Oculopharyngeal muscular dystrophy, 164300 (3) Oculopharyngeal muscular dystrophy, autosomal recessive, 257950 (3)
602280	Retinitis pigmentosa-14, 600132 (3)
602363	Ellis-van Creveld-like syndrome (2)
602397	Cholestasis, benign recurrent intrahepatic, 243300 (3) Cholestasis, progressive familial intrahepatic-1, 211600 (3)
602404	Parkinson disease, type 3 (2)
602421	Congenital bilateral absence of vas deferens, 277180 (3) Cystic fibrosis, 219700 (3) Sweat chloride elevation without CF (3)
602447	Coronary artery disease, susceptibility to (3)

602460	Deafness, autosomal dominant 15, 602459 (3)
602475	Ossification of posterior longitudinal ligament of spine (2)
602476	Febrile convulsions, familial, 1 (2)
602477	Febrile convulsions, familial, 2 (2)
602491	Hyperlipidemia, familial combined, 1 (2)
602522	Bartter syndrome, infantile, with sensorineural deafness (2)
602544	Parkinson disease, juvenile, type 2, 600116 (3)
602574	Deafness, autosomal dominant 12, 601842 (3) Deafness, autosomal dominant 8, 601543 (3)
602575	Nail-patella syndrome with open-angle glaucoma, 137750 (3) Nail-patella syndrome, 161200 (3)
602616	Carbohydrate-deficient glycoprotein syndrome, type II, 212066 (3)
602629	Dystonia-6, torsion (2)
602631	Breast Cancer (3) Rhabdomyosarcoma, 268210 (3)
602639	Hypodontia, autosomal recessive (2)
602666	Deafness, autosomal recessive 3, 600316 (3)
602667	Nijmegen breakage syndrome, 251260 (3)
602669	Anterior segment mesenchymal dysgenesis and cataract, 107250 (3) Cataract, congenital (3)
602716	Nephrosis-1, congenital, Finnish type, 256300 (3)
602759	Prostate cancer, hereditary, 2, 176807 (2)
602771	Muscular dystrophy, congenital, with early spine rigidity (2)
602772	Retinitis pigmentosa-24 (2)
602782	Faisalabad histiocytosis (2)
602783	Spastic paraplegia-7 (3)

The polypeptides of the invention can be prepared in any suitable manner. Such polypeptides include isolated naturally occurring polypeptides, recombinantly produced polypeptides, synthetically produced polypeptides, or polypeptides produced by a combination of these methods. Means for preparing such polypeptides are well understood in the art.

The polypeptides may be in the form of the secreted protein, including the mature form, or may be a part of a larger protein, such as a fusion protein (see below). It is often advantageous to include an additional amino acid sequence which contains secretory or leader sequences, pro-sequences, sequences which aid in purification, such as multiple histidine residues, or an additional sequence for stability during recombinant production.

The polypeptides of the present invention are preferably provided in an isolated form, and preferably are substantially purified. A recombinantly produced version of a polypeptide, including the secreted polypeptide, can be substantially purified using techniques described herein or otherwise known in the art, such as, for example, by the one-step method described in Smith and Johnson, Gene 67:31-40 (1988). Polypeptides of the invention also can be purified from natural, synthetic or recombinant sources using techniques described herein or otherwise known in the art, such as, for example, antibodies of the invention raised against the colon cancer antigens in methods which are well known in the art.

The present invention provides a polynucleotide comprising, or alternatively consisting of, the nucleic acid sequence of SEQ ID NO:X, and/or a cDNA contained in the ATCC deposit. The present invention also provides a polypeptide comprising, or alternatively, consisting of, the polypeptide sequence of SEQ ID NO:Y and/or a polypeptide encoded by a cDNA contained in the ATCC deposit. Polynucleotides encoding a polypeptide comprising, or alternatively consisting of the polypeptide sequence of SEQ ID NO:Y and/or a polypeptide sequence encoded by a cDNA contained in the ATCC deposits are also encompassed by the invention.

Many polynucleotide sequences, such as EST sequences, are publicly available and accessible through sequence databases and may have been publicly available prior to conception of the present invention. Preferably, such related polynucleotides are specifically excluded from the scope of the present invention. To list every related sequence would unduly burden the disclosure of this application. Accordingly, for each "Contig Id" listed in

the third column of Table 7, preferably excluded are one or more polynucleotides comprising a nucleotide sequence described in the second column of Table 7 by the general formula of a-b, each of which are uniquely defined for the SEQ ID NO:X corresponding to that Contig Id in the fourth column of Table 7. Additionally, specific embodiments are  
5 directed to polynucleotide sequences excluding one, two, three, four or more of the specific polynucleotide sequences referenced by Genbank Accession No. for each Contig Id which may be included in column five of Table 7. In no way is this listing meant to encompass all of the sequences which may be excluded by the general formula, it is just a representative example. All references available through these accessions are hereby incorporated by  
10 reference in their entirety.



Table 7

SEQ ID NO:X	CLONE ID:Z	CONTIG ID:	GENERAL FORMULA	ACCESSION NUMBERS
1	HTWEP07	390631	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 393 of SEQ ID NO:1, b is an integer of 15 to 407, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1, and where b is greater than or equal to a + 14.	AL119989, T80240, AA773747, AA809992, AA281432, AF051311, AF053535, AF070615, AF145284, AB014560, U65313, AF145285
2	HODBA26	410299	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 399 of SEQ ID NO:2, b is an integer of 15 to 413, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2, and where b is greater than or equal to a + 14.	
3	HPMEF95	456200	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 460 of	N76659, T85798, AW379474, AR016730, D50857

4	HCFCY21	456438	<p>SEQ ID NO:3, b is an integer of 15 to 474, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:3, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1829 of SEQ ID NO:4, b is an integer of 15 to 1843, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:4, and where b is greater than or equal to a + 14.</p>	<p>AI866002, AI476046, AI610645, AI561299, AI433976, AI251830, AW085667, AW403717, AI868831, AL045266, AI801325, AL038605, AW117746, AI815855, AI873644, AI674838, AI678599, AI609593, AI498579, AI799199, AI867042, AL039086, AW051107, AI696626, AI174394, AI521012, AI633419, AI890806, AI796743, AW103371, AA640779, AW162071, AI816010, AI480118, AI824557, AI499285, AI340582, AW059837, AW071417, AW132056, AI569616, AI872711, AI872545, AI918655, AI955917, AI620003, AI862139, AI696612, AW081036, AI289937, AI274508, AI434468, AI284131, AW082040, AW302988, AI890833, AI926790, AI568870, AW102785, AW103893, AI564719, AI281772, AI889376, AI524671, AW051258, AI919345, AI554245, AI921248, AI611738, AW002342, AI619502, AI677796, AI632408, AI802542, AI308035, AI886753, AI933589, AW026882, AI636719, AI476109, AI923768, AI783504, AL079963, AL036396, AI567351, AI620284, AL119863, AI500039, AI274013, AW301505, AI922365, AW195968, AI587288, AI345587, AI433157, AI702073, AL036759, AI366549, AI446373, AW238730, AI500706, AI537677, AW083804, AI520931, AI500662, AI633125, AW161579, AL041772, AI648663, AI500523, AI682841, AW005858, AI284517, AW129916, AI242249, AI888944, AW050522, AW192375, AA494167, AW268220,</p>
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			AI570781, AI491897, AI349645, AI364788, AI224992, AI318280, AI284509, AL036146, AI799472, AI953562, AL042628, AI673256, AI559296, AI538085, AL036403, AI250663, AI554218, AA427700, AI571909, AI702433, AI591316, AI922901, AI362637, AI924971, AI569583, AI554427, AI273142, AL040241, AW088134, AI269862, AI500553, AI345347, AL119836, AI612759, AW150578, AW190042, AI269696, AI922676, AI800453, AI800433, AI921176, AI888953, AI886124, AI499463, AI874166, AI445165, AI963216, AI590120, AI308032, AW149227, AI828731, AI282326, AI590118, AW079159, AI287326, AI343059, AA572758, AW023590, AW169653, AI648684, AI687065, AI608676, AI811845, AI349933, AI863014, AI468872, AI950664, AI280661, AI345608, AL120853, AI340603, AI680498, AI537617, AW088903, AI567360, AI499381, AI281779, AI348897, AW168650, AI349004, AW081255, AI383919, AI280637, AI539153, AI539771, AI824444, AI608936, AI866608, AI611743, AI687362, AI862144, AC006373, AC009501, AC004808, AL035407, AC006313, AC008014, AC004470, Z98036, AC004159, AC006039, AL022394
5	HMKCO08	467315	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 457 of SEQ ID NO:5, b is an integer of 15 to 471, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p> <p>AI905893, AI905911, D50640, Z22867</p>

6	HBAGS04	471563	NO:5, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 891 of SEQ ID NO:6, b is an integer of 15 to 905, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:6, and where b is greater than or equal to a + 14.	AA148799, AA148530, AA463550, AI979134, AW264037, AA252163, AC004158, AL031118, AC006484, Z75888, Y10196
7	HALSQ75	488131	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 398 of SEQ ID NO:7, b is an integer of 15 to 412, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:7, and where b is greater than or equal to a + 14.	AI352096, AA376070, T81033
8	HMVBD21	490848	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 738 of SEQ ID NO:8, b is an integer of 15 to 752, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID	AI767324, AL121194, AA972628, AI095851, AA743343, AW366882, D20570, AC009802

9	HKIMD67	500696	<p>NO:8, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 628 of SEQ ID NO:9, b is an integer of 15 to 642, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:9, and where b is greater than or equal to a + 14.</p>	<p>T71949, N95702, AI306688, AW451579, AI341434, AI223407, AA885055, AA846712, AA379446, AW362461, H42165, D80959, AI928895, AA081721, D87459, AF134303</p>
10	HOOAE34	504559	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 197 of SEQ ID NO:10, b is an integer of 15 to 211, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:10, and where b is greater than or equal to a + 14.</p>	<p>AI380563, AI004009, AI625234, AW337321, AA321125, AA937785, AA363438</p>
11	HHSD62	506406	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 518 of SEQ ID NO:11, b is an integer of 15 to 532, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	<p>AW409739, AA773074, AI083705, AI870827, AI126674, W94001, AI273489, AI275482, AI264045, AI423593, AI350937, AI393684, R76773, AA483544, AW131780, AI091146, AA130101, AA255799, AA976695, AA774090, R76460, AI206751, AI350938, AA418479, AI669701, AA669454, H04098, AA460849, AI784675, R49064, AA130100, AA639898, AA639917, AA700950, AA082299, AA702716, X07233, X15051, X15052</p>

12	HSLGZ32	506619	NO:11, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1106 of SEQ ID NO:12, b is an integer of 15 to 1120, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:12, and where b is greater than or equal to a + 14.	AA316122, AA314900, AF121202
13	HCENL15	507852	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 586 of SEQ ID NO:13, b is an integer of 15 to 600, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:13, and where b is greater than or equal to a + 14.	N40063, AA233205, R46529, AI015135, AW130559, AA324511, AI460380, AA346401, AA604942, AI125644, AI703464, T67213, AW103052, AI452537, AI050784, AI949725, AI052071
14	HCQA138	509423	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 793 of SEQ ID NO:14, b is an integer of 15 to 807, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID	AW118906, AA134595, N40901, AA134594, AL138019, AW274753, T35439, T10802

15	HPMDT48	509734	NO:14, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 402 of SEQ ID NO:15, b is an integer of 15 to 416, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:15, and where b is greater than or equal to a + 14.	AA315821
16	HADFX66	509856	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 738 of SEQ ID NO:16, b is an integer of 15 to 752, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:16, and where b is greater than or equal to a + 14.	AA845353, N31960, AA617724, AA307653, AA862795, N92883, R60191, AA321715, AI802963, W23451, AA905145, W25563, AA469079, R60190, R18173
17	HONAI01	524721	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 467 of SEQ ID NO:17, b is an integer of 15 to 481, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID	AA362921, AA436291, AA425301, AL079672, AW361081, AW341687, AA284486, AI880015, AI379662, AI935013, AA436164, AI066555, AA837415, AA706542, AI126021, AB028996

18	HEBBT54	524901	NO:17, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 898 of SEQ ID NO:18, b is an integer of 15 to 912, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:18, and where b is greater than or equal to a + 14.	T85603, AA132177, AA314644, AA133670, T99921, AL039938, R01637, AA046158, AP000497, D88153
19	H2CBG63	527600	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 493 of SEQ ID NO:19, b is an integer of 15 to 507, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:19, and where b is greater than or equal to a + 14.	AA307234, R60594, AC007327
20	HHSBA79	527827	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 396 of SEQ ID NO:20, b is an integer of 15 to 410, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID	AA247517, AI915163, AI690026, AC004817, AL132774, AL078602, AC003999, AL136168, AL022396, Z68325, AL035414, AB020868, U95740, AC007685, AL049712, AP000067, AC002992, AL022148, U95741, U95743, AC007304, AC002390, AC005482, Z82188, AC005477, AC005295, AL035408, AC007028, AL035608, AC004917, AL132992, AC002385, AC007064, AC004825



21	HCQAQ89	529050	NO:20, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 482 of SEQ ID NO:21, b is an integer of 15 to 496, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:21, and where b is greater than or equal to a + 14.	
22	HELGI91	529465	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 349 of SEQ ID NO:22, b is an integer of 15 to 363, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:22, and where b is greater than or equal to a + 14.	
23	HADBE91	530612	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 225 of SEQ ID NO:23, b is an integer of 15 to 239, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID	AW392520

24	HSAAX52	530773	<p>NO:23, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 447 of SEQ ID NO:24, b is an integer of 15 to 461, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:24, and where b is greater than or equal to a + 14.</p>	AA299283, AW379368, AA374069, D61135, D60581
25	HACCE33	532810	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 439 of SEQ ID NO:25, b is an integer of 15 to 453, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:25, and where b is greater than or equal to a + 14.</p>	AA305030, AI207985, AA469325, AA420424, D10040, L09229
26	HE8DA85	533242	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1926 of SEQ ID NO:26, b is an integer of 15 to 1940, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	<p>AI052713, AA993209, AI133542, AI160185, AI110772, AA443423, AA406485, AI806057, AI114495, AA410346, AI436310, AI370818, AL035763, T11697, C21213, AA707071, N54577, H52269, R89600, F06943, R98692, R97937, W84760, R98918, AA358620, AI207561, H65229, AI123345, H60435, R98546, AA010003, R98713, AA332857, AI131251, T75531, H52507, T29077, AW440733, R98714, T53093, H80150, H78893, H79897, AA010004, R20093, W84755, AI351429, AI185625,</p>

			NO:26, and where b is greater than or equal to a + 14.	R98547, AA628869, N76658, T75490, N52438, F03211, AA026133, AA342031, H65230, H60481, T55303, H79803, N77400, T81302, AA029616, R97938, AL035762, T11698, T52339, T55135, C21277, AI056662, T52412, AA699919, R88921, X60364, X56352, AF086786, M15268, D86297, M63244, Z83821, AL020991, AF068624
27	HSKII86	541126	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 850 of SEQ ID NO:27, b is an integer of 15 to 864, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:27, and where b is greater than or equal to a + 14.	AA305909, AA354725, AA296543, AA347633, AA100063, AA424070, AA296485, AI795779, AW239153, AA337079, T87056, AA263171, AA044017, AA044192, AI683358, AW363341, AW138402, AA294979, AA424397, AW134673, T75498, AA827350, M55542, M55543, AR035947, M55544, M63961, AF109168, AJ007970, AF077007, M80367, AR035948
28	HUSGI39	542268	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 689 of SEQ ID NO:28, b is an integer of 15 to 703, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:28, and where b is greater than or equal to a + 14.	AW407143, AA213542, AA284733, AA485799, AI761438, AC005368
29	HKIMB44	547920	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a	AI985978, AW070887, R76142, AW089184, N31775, AI687598, AI963830, AL035869, AI697270, R83410, W94030, AW083686, AI188661, AA653485, AA165514, AW188780, AA989157, AI473469, H69762, AI925548, AA908930, AA340369, AI682723, AI950093,

		is any integer between 1 to 323 of SEQ ID NO:29, b is an integer of 15 to 337, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:29, and where b is greater than or equal to a + 14.	AW438743, AI654303, H70528, T82154, H63221, AI954998, AI186315, W85840, W26638, AW190908, AA496463, AA961655, D55762, D55763, D54646, D54319, AA089984, D53696, D52797, W94645, W28832, D55240, AA729249, C15803, AA165556, AA524229, AW194507, AI110844, AI434080, AA100718, AI821986, AI085242, AA903287, AA024410, AI536908, AA053088, AI421841, AI821788, AI821745, T52103, AI540625, AA011625, AI343076, AA167055, AA572953, AW206369, AA284416, J05032, AC003666, Z69838, AC005952, AL031679, AL024474, AC000112, AP000361, AL021977, AC005215, AC004903, AC006238, AF090940, AL050318, AC006211, AC006077, AF113009, AF095901, AL049636, AC004551, Z99289, AC005796, AL136520, AC003104, AF015148, AP000214, Z81310, AP000255, AC004851, AP000135, AC006344, AC007245, AL031983, AL034554, AP000031, AC005520, AC005154, AL133353, AC005737, AL049779, AF055481, AC005335, AL034418, AC002382, AC005037, AC007240, AC005594, AC005018, AF207550, AF038633, AC005779, AF037338, AC004257, AL021878, AC005999, AL132641, Z84488, AF001549, AC006453, AL008639, AC004099, AC007463, AC008163, Z98044, AC007387, AF141976, AC002365, L30117, U73023, AL033543, AC007160, AC003119, AL078581 
30	HBMVJ62	549642	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 617 of SEQ ID NO:30, b is an integer of 15 to 631, where both a and b correspond to the positions of

31	HBXFC78	550207	nucleotide residues shown in SEQ ID NO:30, and where b is greater than or equal to a + 14.	AC001526, AL031073, AL049828, U69730, AC005057, Z69648, AC007685, AL096861, AL079304, AC005011, AL022578, AC004858, AC008064, AF109907, AP000338, AP000216, AL136168, AC005821, AC003964, AB020868, AC007656, AC007437, AC006210, AL035414, AC004103, AC005971, AP000067, AC005697, AC009946, AC005953, AC002331, Z97054, Z82188, AC004791, AC005380, AC005616, AC004679, Z97055, AC003991, AC007263, AC007280
32	HE2FR32	552115	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 557 of SEQ ID NO:31, b is an integer of 15 to 571, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:31, and where b is greater than or equal to a + 14.	AW150151, AI689429, AI952267, AI521422, AI920793, N70051, AI743691, AI769315, AI168431, N50902, AI291826, AI123242, AA814094, H23837, AI915645, N50944, AA113864, AA479473, AW028954, AW079750, AI783813, AI824715, AA479362, AW051241, AI566595, C21435, AI269275, AL050285
33	HKACD58	552465	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 410 of SEQ ID NO:32, b is an integer of 15 to 424, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:32, and where b is greater than or equal to a + 14.	C19093, AA479586, AI417611, AA477425, W07367, AW403461, AA292357, N32437, AA258489, U69127
			Preferably excluded from the present invention are one or more	AA877796, AW027434, AI335269, N46240, AW402301, AI525602, H38504, AW390227, AI365603, AI819188,

		<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1612 of SEQ ID NO:33, b is an integer of 15 to 1626, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:33, and where b is greater than or equal to a + 14.</p>	<p>AW390207, AW368379, R53778, AA370005, AA134615, AA354527, R69656, AI524965, AA425001, F37313, AI829975, AW339374, AA227281, F27458, AA495894, R78049, AA355898, AI360437, AA149032, R55146, T74386, R54897, AI204915, R88102, H21738, AI971329, AI193372, AA380842, AA343322, AI908997, AI096656, AI367032, AA121830, H22385, AI085242, AA149757, AI433008, AA814721, AA555145, T27702, AI249880, AI434080, AI561147, AL039478, AW151664, AL046021, AI627436, AI732975, AL110373, AA853473, AI805349, AA903287, R46841, AA551390, AA662117, AI821062, AA722215, AI088768, AI368745, AA688217, AW081103, AA019257, F00107, AL046262, AI557808, AI064787, AA618452, AI110708, AL040077, AA653459, AA764903, AI627181, AA235975, AI823716, AA877935, AA659232, AI821259, AI887241, AL110402, AW089171, AA937752, AI874222, AL138455, N52358, AW079659, AI133029, AI111171, AA806438, AI345797, AL042753, AW083846, T62495, AL042853, AI114443, AL042567, AW105519, AL041318, AI440117, AA828395, AI821788, AI821745, AI207728, AW104715, AI249447, AI039141, AI369580, AW167385, AI821986, AW160760, AL038134, AL042731, AL038182, AL050037, AC006455, AF075046, AC005778, AL031282, AP000250, U73023, AL078598, AP000211, AP000133, AP000030, AC009300, AC005520, AC006017, AF095901, AP000080, AL117354, AC004990, AF003738, V00744, J00629, AP000361, AL136130, AC002078, Z84489, AC007748, AC003042, AC007242, AC004974, AC005095, AC006458, AL031274, Z82206, Z99495, AL117337, Z83844, AC009044, AC005284, AC002531, AC005036, AC006205, J00349, Z98036, AL031774, AC004093, AC011013, AC005006, AC005078, AC002382,</p>
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	AL021391, AF053356, AF162270, AL049742, U67221, AC005074, AF090940, L30117, J05032, AF045527, AL031720, AF057280, AF126531, X91656, AC004400, AC005793, Z82250, AC004170, AF045450, AC004213, AC004209, AC000394, AC003005, AC006139, AF184110, AL121915, U89335, AL033543, AL049576, AL031662, AF024533, AC005353, Z99714, Z93784, AC002564, AL022315, AC002467, AP000206, AC002301, AL049761, Z98748, AL031656, AC004900, AL109807, AC005741, AC004858, AC007114, AC006344, AC008071, AC007390, AC005295, AC006965, AL035067, AL020994, U95742, AC004936, AC005479, AC004671, AC002432, AL022723, AC005527, AC004888, AC004626, AC004894, AC002060, AC008014, AC004544, AL136520, AC006160, Z99289, AC005296, AC006296, AF109907, AC005529, S75940, AP000319, AP000167, AP000052, AP000120, AL031667, AC000053, AF206503, AP000569, AC005057, AC007216, AL050309, AL109865, AC006956, AL031346, AF110520, AC007049, AC002482, AL079340, AC006480, AP000350, AC005386, AC002086, AF135026, AC004589, Z49235, AF195658, AC004210, AC002559, AC005667, AC004854, AP000508, AC002462, AL034553, Z92543, Z83840, AL031281, AC005886, AL034554, AC006029, AC007671, AL021918, AL035086, AC005209, AC007385, AC007055, AC006530, D84394, AC002428, AC007877, AC006944, AF200465, Z99297, AB012260, U73638, AC000022, AC003688, AL133371, AL031681, AC007461, AC005992, D83989, S75201, AF088219, AC006582, AC004989, AB012179, AC004972, AC003048, U67233, AL137293, AL079342, AF003737, AF113015, AL122021, AC000025, X58156, D38178, M38180, U89387, Y11740, Z49258, AC004760, AC004536, AL035450, AC004940, AL080245, X66401, AC004769,

34	HDAAB62	554369	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 436 of SEQ ID NO:34, b is an integer of 15 to 450, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:34, and where b is greater than or equal to a + 14.</p>	<p>AC006221, AC004009, AP000338, AL022399, AL022393, AL033523, AC005008, AC005250, AL096770, AA308748, AA307995, AA312596, AA307928, AA314740, AA307129, AA102186, AA343955, AA353457, AA361582, AA362045, N86980, AA227387, AA172125, AL046225, AI241561, N66944, N66930, AA553392, Z27098, AL045756, C17672, AA484304, AA484273, AI673070, AA622421, AA662921, T07307, AA487199, AA769512, AA587021, AA151746, AW089861, N68288, AI590255, AI689532, AW135366, W61121, W52658, W81691, AI821039, AI361845, AA743299, AA196412, X16396, AL024507, AC004894, M63439, J04627, AC005803, AJ003147, AC008040, AC005602, AC000378, AL135783, AC005328, U07562, AC004813, AL031666, Z82198, D13631, D25304, AL021328, AC003072, Z98256, AL031320, AC000353, AC007172, AF001549, AC003957, AP000687, AP000688, AC005229, AL109758, U40369, AP000302, AL049919, AC002398, X55448, AC002352, AB003151, AC005737, L44140, AL009183, AC003029, AC004453, AL035447, AF051976, AL035398, AC002492, AC007938, AC007382, AC005288, Z84469, AC005837, AC009498, AC005899, AL078602, AC003102, AL023575, AC002425</p>
35	HEPBA24	557152	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 946 of SEQ ID NO:35, b is an integer of 15 to 960, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:35, and where b is greater than or equal to a + 14.</p>	<p>AA632191, AW151795, R59316, AI338706, AI276888, AI366798, AI471791, AA565616, AI248949, AI269722, AI393882, AA504204, AA813608, AI335657, AA682615, AI039562, AA400139, AA187165, AI376431, AA454074, AA128383, AI002866, AA929034, R46374, AA810231, AI241427, AA865170, AI567959, W93122, N47805, AA335391, AI919230, AI242499, AA401552, T28382, AA453654, AA335614, AA336149, AA335946, R41308, T24710, AI017254, D26018</p>



36	H0GBL08	557230	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 516 of SEQ ID NO:36, b is an integer of 15 to 530, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:36, and where b is greater than or equal to a + 14.</p>	<p>AA151092, AA367221, F09233, AA442256, AA442255, AA933632, W80475, H22100, AI274366, AA909429, AI918108, AI499770, AI278711, AA948413, AA831784, AI470908, AA936238, W94676, AI002684, AI050788, AI264677, AI246792, AI276574, AI352684, AA428287, AI952002, AI890744, AI806291, T18857, AI819539, R43330, AI749667, R71480, AI262455, N75456, AI869496, AA826541, AA436899, AI187706, AL135960, AJ131016, U21049, AC006487, U80460</p>
37	HCYBD62	558366	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 524 of SEQ ID NO:37, b is an integer of 15 to 538, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:37, and where b is greater than or equal to a + 14.</p>	<p>AA305096, AA424823, AA995932, AW001055, AI016665, AI399850, AI636182, AI949894, AW361640, AI634640, AW377132, AW377117, AW388099, W07829, AA993439, X89602, X67098</p>
38	H2CBD20	570796	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1242 of SEQ ID NO:38, b is an integer of 15 to 1256, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:38, and where b is greater than or equal to a + 14.</p>	<p>AA307235, AI002535, H49502, AL110292</p>

39	HCQAT53	573181	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 652 of SEQ ID NO:39, b is an integer of 15 to 666, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:39, and where b is greater than or equal to a + 14.</p>	<p>AI761465, AW270500, AA290850, AA953717, H57392, AI127126, T82331, AW293000, AA973625, AI298354, AW451105, Z64718, Z64717</p>
40	HETDN09	573199	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1002 of SEQ ID NO:40, b is an integer of 15 to 1016, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:40, and where b is greater than or equal to a + 14.</p>	<p>AI022684, AI807626, AI032750, AI026655, AA931238, AI806336, AI683663, AA062961, AA035619, AA701296, AW351549, AA632626, AA620715, AI690779, AA613277, AA918186, AI500592, AA812859, AI339340, AA911056, AI138829, AA962373, AI826452, AI620160, AI621126, AA642617, AI263569, AA158084, AW183356, AI311751, AI862278, AI305952, AI377600, AI345876, AI340524, AI284742, AI311267, AI310838, R71902, AI311602, H72019, AW301795, AI344075, AI344264, AA863452, R71938, AI311175, AI345015, H72018, AI305761, J04131, X60069, M24087, M24903, E02290, J05235, L20490, L20493, L20492, L20491, AP000356, AC008132, AP000550, AC008018, AC011718, AC007981, AC012330, X98922, AC000051, D87002, AC012331, AC002308, M30474, AP000354, X15443, M33822, M33821, AC007325, M30479, L10395, L10394, L10398, L10399, L10397, L10396, Z93345, Z93348, Z93344, Z93343, AJ007380, Z93342, Z93346, Z93347, M30475, M30478, M30477, M30476, Y09833, AJ006789</p>
41	HCYBE04	573793	<p>Preferably excluded from the present invention are one or more</p>	<p>AA305129, AA768244, AA310241</p>

42	HDPFI14	573796	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 409 of SEQ ID NO:41, b is an integer of 15 to 423, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:41, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 947 of SEQ ID NO:42, b is an integer of 15 to 961, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:42, and where b is greater than or equal to a + 14.</p>	<p>AA316491, AA704220, R80096, AA305136, R57983, AW009438, D83243, X97186, U58852, D89853, D89852, D89851</p>
43	HJBCD90	574094	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 531 of SEQ ID NO:43, b is an integer of 15 to 545, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:43, and where b is greater than or equal to a + 14.</p>	<p>AA311657, N88312, AA307717, Z21301, AA551523, AA631395, D80164, D80212, C14389, D59502, D80391, D59787, D80439, D80196, AA305409, D80268, D51799, D59859, D51060, C15076, D59610, D80022, D80166, C14014, D80195, D59619, D80247, D58283, D51022, D80210, D80240, AA514188, C06015, D50995, C14331, D59467, D51423, D80133, D59275, D80253, D80038, D80043, D80227, D81026, D80522, D59927, D81030, D80219, D80269, D80024, D80366, D80188, D80248, AA514186, D50979, D51103, AA305578, D80157, D80241, D80193, D57483, T03116, D80045, D59889, D51759, D80302, D45260, D81111, C03092, AW377671, D80378, D59551, AW177440, AW178893, C14429, AI525923,</p>

<p>D80251, F13647, D59503, AA809122, C14227, T11417, D58101, AW375405, AW360844, T03269, D59317, H67854, H67866, AW360811, C14973, D80014, C14344, AW360817, AW360834, D58246, D59627, AI525917, D80258, D80064, D51221, D59474, AW178906, AW177511, AI535686, AI525920, Z30160, AW177501, AW179328, D59695, AW179020, T48593, AW377676, AW375406, AW378534, AI525235, AW352171, AW179332, AW377672, AW179023, AW178905, AW179013, Z21582, AW177731, AI525925, AI525227, AW378528, AW178762, AW178754, AW179019, AW360841, AW179024, AW378533, AI557774, AW378532, AW352120, AA514184, AW352117, D60214, C14407, AW378539, AW177505, AW178775, C14046, AW178909, H67858, AW177456, AW179004, AW352170, AW178986, AI525215, D51250, AW178907, AW177733, AW178908, AW179018, AW352158, AW178971, D31458, AW178914, AW178774, AW178781, AW378543, AW378540, AI525242, AI525912, AA285331, AW177734, AI557751, D45273, AW179017, C06084, C13958, AW367950, C16955, D80168, AW178759, AW179009, AW179012, AW178980, Z33452, T02974, AI525237, AI535665, D80949, AW378542, C05763, D52291, C14298, D51213, AW178911, C14077, AW378525, AW352163, AW360855, T02868, AW177728, T03048, AW369651, AI525228, T11191, AI525914, AC007262, A82595, AR060385, AB028859, AJ132110, AR018138, A84916, AB002449, A62300, A62298, AR008278, AF058696, I50126, I50132, I50128, I50133, I14842, AR054175, AR016514, X67155, Y17187, AR060138, A45456, Y17188, A94995, D26022, AR008277, AR008281, A26615, AR052274, A43192, Y12724, A63261, A43190, AR038669, A25909, AR066488, Y09669, AR066487, A70867, A67220, D89785, A78862, D34614, A30438, AR062872, AR008443, AR016691,</p>	
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44	HABAB40	574927	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 363 of SEQ ID NO:44, b is an integer of 15 to 377, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:44, and where b is greater than or equal to a + 14.</p>	<p>AR016690, I79511, U46128, A64136, A68321, X64588, D88547, D50010, X68127, X82626, AR008408, AR025207, AF123263, AR060133 AA280602, AA316028</p>
45	H2MCA74	575139	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 426 of SEQ ID NO:45, b is an integer of 15 to 440, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:45, and where b is greater than or equal to a + 14.</p>	<p>AA316835, AA112812, AI028747, W87680, AI082423, AA068997, H73681, AW193615, AC005669, U15177, U71148, AL035458, AC006115, Z49237, AB026898, AP000498, Z21853, AC004706, AL133162, AC004034, AC002054, AC006369, AC007664, AC002049, AC008018, AL122127, AL035086, AC002472, AJ223364, AF017732, AL032821, AP000345, AC004045, AP000346, AB019438, Z97634, AF118808, AC005515, AL021155, AF196969, AF017187, AC004976, AF017188, AC005037, AL031228</p>
46	HWBAX42	575591	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 511 of SEQ ID NO:46, b is an integer of 15 to 525, where both a and b correspond to the positions of</p>	<p>AW068735, AA853585, AA380263, AL121408, AL121410, X64330, U18197, L27075, J05210, L47278</p>

47	HLMMR55	576132	nucleotide residues shown in SEQ ID NO:46, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 400 of SEQ ID NO:47, b is an integer of 15 to 414, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:47, and where b is greater than or equal to a + 14.		
48	HNFGN91	577390	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 309 of SEQ ID NO:48, b is an integer of 15 to 323, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:48, and where b is greater than or equal to a + 14.	AJ011930	
49	HTWDI90	577685	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 827 of SEQ ID NO:49, b is an integer of 15 to 841, where both a and b correspond to the positions of	AI743511, AI807252, AA769584, AW340026, AW340029, AA970935, AI807551, AA934884, AA769047, AA804530, AW340028, AA286746	

50	HCQAB18	578079	nucleotide residues shown in SEQ ID NO:49, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 520 of SEQ ID NO:50, b is an integer of 15 to 534, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:50, and where b is greater than or equal to a + 14.	AA721676, AI632745, AI478171, AI719338, AA761073, AI766631, AA485859, AW059674, AI797505, AI709367, AC000123, AC000127
51	HELHI45	578660	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 303 of SEQ ID NO:51, b is an integer of 15 to 317, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:51, and where b is greater than or equal to a + 14.	N36929, AA771779, AW196937, AA342301, AI808034, AI432219, AI694329
52	HINHDI6	580860	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1775 of SEQ ID NO:52, b is an integer of 15 to 1789, where both a and b correspond to the positions of	AL049874, Z84488, AC002549, AC003035

53	HOAAD32	581143	nucleotide residues shown in SEQ ID NO:52, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 640 of SEQ ID NO:53, b is an integer of 15 to 654, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:53, and where b is greater than or equal to a + 14.	AA307601, AI760475, AI972520, AI990288, AI675118, AI669210, AW003506, AW016052, AI984626, AI880850, AA807606, AI685689, AA766936, AI342189, AI824926, AI770146, AI202899, AI075305, AI637764, AI611102, W19739, AI206868, AA825282, AI300737, AI419015, W95671, AA234976, AI052432, AI766516, AI830638, AI830514, W95767, AI341456, AI342005, AI695951, R33457, AA935544, AI738445, AA648791, AI625335, R68590
54	HSAVM80	584899	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 320 of SEQ ID NO:54, b is an integer of 15 to 334, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:54, and where b is greater than or equal to a + 14.	AI902580
55	HWLMA5 I	600669	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 460 of SEQ ID NO:55, b is an integer of 15 to 474, where both a and b correspond to the positions of	AI341167, AI652526, AI990232, Z22968, Z22969, Z22971, Z22970, Y18391, Y18392, Y18390



56	HE8BQ01	611839	nucleotide residues shown in SEQ ID NO:55, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 353 of SEQ ID NO:56, b is an integer of 15 to 367, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:56, and where b is greater than or equal to a + 14.	AI267198, AW242820, H89792, T98720, AI743953, AA034283, AI912188, AI268316, AA282592, AI955322, AI680802, AI138929, AA854852, AW340279, AI633670, AI140173, AI914144
57	HELHD03	614078	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 550 of SEQ ID NO:57, b is an integer of 15 to 564, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:57, and where b is greater than or equal to a + 14.	AW028557, AW008015, AA279640
58	HBMCT70	614554	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 430 of SEQ ID NO:58, b is an integer of 15 to 444, where both a and b correspond to the positions of	N31002, AA504707, AL041182, M78574

59	HLYDF04	615029	nucleotide residues shown in SEQ ID NO:58, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 333 of SEQ ID NO:59, b is an integer of 15 to 347, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:59, and where b is greater than or equal to a + 14.	AI972404, AWI72842, AL079983, AI769801, AI769431, AI472252, AA036804, D79445, AI282586, AI935375, AI569290, AA450323
60	HDSAP04	615590	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 308 of SEQ ID NO:60, b is an integer of 15 to 322, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:60, and where b is greater than or equal to a + 14.	AI732729, AI858825, AI625874, AI266164, AA402921, AA426648, AI039796, AI567237, AW090009, AC000064, AC007566
61	HWBFZ21	630230	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 820 of SEQ ID NO:61, b is an integer of 15 to 834, where both a and b correspond to the positions of	AW369648, AI904452, AF098799, AL137335

62	HCQBH72	637548	nucleotide residues shown in SEQ ID NO:61, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1782 of SEQ ID NO:62, b is an integer of 15 to 1796, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:62, and where b is greater than or equal to a + 14.	AA640538, AA649644, AA649707, R31618, AA652004, R32348
63	HELGH31	637605	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1362 of SEQ ID NO:63, b is an integer of 15 to 1376, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:63, and where b is greater than or equal to a + 14.	N98658, AI967961, AA888070, AA653693, AI985864, AI342233, AI201196, N66161, AW117713, AW117695, N30234, N34009, H98804, AA969760, AI017192, AW242529, AW087505, R77266, R67143, AA310805, AI188021, N66135, AA300547, C16517, H01413, AA972789, D12299, H99892, R77313, N57126, N24566, N25024, AA633387, N98686, AA334492, H01414, D12297, AI217112, AA724744, AA482680, AA480427, R66409, C16522, C16404, H87992, C16332, AA280332, AL035410
64	HNHEU34	638125	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 560 of SEQ ID NO:64, b is an integer of 15 to 574, where both a and b correspond to the positions of	AC004876, Y12661, M60522, M60525, M74223

65	HJMAF30	638188	nucleotide residues shown in SEQ ID NO:64, and where b is greater than or equal to a + 14.  Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 589 of SEQ ID NO:65, b is an integer of 15 to 603, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:65, and where b is greater than or equal to a + 14.	AI090108, AA810218, AA513307, AW028090, AI572270, AW451013, AI373062, AI492435, AI141965, AI161216, AI952357, AI420596, AI804945, AI123032, AI478408, AI830622, AI984276, AA588635, C15098, AI580816, AA430124, AA902480, AI611205, AI928306, AI824182, AA368086, AA731886, AA358722, AA732765, AW383478, AA470116, AI928316, AW383528, AA358723, AW383489, AL046849, AI075391, AA974899, AI630005, AC008126
66	HWBBK93	638249	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1758 of SEQ ID NO:66, b is an integer of 15 to 1772, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:66, and where b is greater than or equal to a + 14.	AI188389, AI763238, AI188787, AA479523, AI423154, AI346520, AW005918, AI682996, AA781395, AI394520, AI700522, AA778127, AW338995, AI348157, AI139369, AA858416, AW291338, AI061441, AI928073, N40533, AA771952, AA835017, AA479526, AA430584, AI276159, AA576421, T34153, AA418766, AI272728, AA563878, AA528124, AI050707, AA433929, AI218374, AA150587, AI422109, AI075212, AI338694, AA418722, AA969029, AA505360, AA782389, AI348193, AA662690, AA904379, AI743240, AI126395, AI090901, AA304971, AI908134, N64614, AA465703, AA505543, AA771799, AI917748, AW271730, AI248295, AA215970, AI811574, R52412, AA971867, AI333671, AI380868, AA574396, R35114, N33899, AW194812, AI280563, R16040, D45470, AW195236, R24139, R79672, W30758, R18084, AA761523, R16039, AI365169, AI864209, N98221, Z40957, T85033, AA725308, AA618381, N99709, AI926895, R02608, R42978, N79943, Z45240, AA320674, N71980, AI630495, T30798, AI886691,

67	HFXAK32	638319	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1815 of SEQ ID NO:67, b is an integer of 15 to 1829, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:67, and where b is greater than or equal to a + 14.</p>	<p>AW089148, R49502, R01668, R24146, AA650492, R79861, AI589880, AA705913, AI247102, AI569369, F02495, T91981, AA248224, T25009</p> <p>AI291718, AI751557, R55888, R52001, H65731, T55784, H65732, T79985, AB001103, U59288, U59289, AL021154, AL034429, Z93016, AC008008, AC002350, AC006948, AC006509, AC005722, AC007182, AF222686, AP000696</p>
68	HUSIT18	6511380	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1674 of SEQ ID NO:68, b is an integer of 15 to 1688, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:68, and where b is greater than or equal to a + 14.</p>	<p>AW294097, AI279800, AA316672, N25621, N34219, AA115172, AI125602, W16706, AA228116, AI348328, AA322714, R59092, AI699089, R51246, AI086372, AA383008, AW339394, AA344347, AA227730, R51245, AB011123</p>
69	HMWBH5 1	651876	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 551 of SEQ ID NO:69, b is an integer of 15 to 565, where both a and b correspond to the positions of</p>	<p>AI554920, AI469981, AI539465, AA425263, T28976, AA812162, AI740449, W21091, AW242010, W23635, AW275702, AA476848, AI808924, AW117295, AI148939, AA811229, AI343010, AI630793, I96178, A50906, L00049, X85754, U09793, K01912, Z12125, E00392, E00393, I01060, M35504, M35505, X02456, X00485, L00047, X02454, U76425, U76426</p>

70	HCQAW11	653175	nucleotide residues shown in SEQ ID NO:69, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 661 of SEQ ID NO:70, b is an integer of 15 to 675, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:70, and where b is greater than or equal to a + 14.	AL041795, AI590066, AI457168, AA126363, AA463388, AA767754, AA463880, AA886811, AW079539, AI884597, H23284, AA907711, AA789127, AI636922, AI039001, AI681335, AA126259, AL050120, AC004925
71	HPRAS01	655544	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 256 of SEQ ID NO:71, b is an integer of 15 to 270, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:71, and where b is greater than or equal to a + 14.	AA370716, AA988839, AI817753, AW131538, AA860117, AI479976, AI568675, AI922252, AW084473, AA370730, AA740955, AA935921, AI566265, AI092718, AA854646, AA724492, AW439983, AL109984
72	HWBBC13	656722	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 524 of SEQ ID NO:72, b is an integer of 15 to 538, where both a and b correspond to the positions of	Z69042

73	HNTBM67	659801	nucleotide residues shown in SEQ ID NO:72, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1057 of SEQ ID NO:73, b is an integer of 15 to 1071, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:73, and where b is greater than or equal to a + 14.	AL134955, AA307472, M78461, D56412, AW382561, AW382555, AW382532, AW382562, AW382559, AA223890, AI536122, AA826373, AW382553, AB014509, AB011159, D84346, X80029
74	HDPKC15	660020	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 626 of SEQ ID NO:74, b is an integer of 15 to 640, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:74, and where b is greater than or equal to a + 14.	AL037983, AL046549, AA630672, AL137998, AA829036, T92347, AW022608, AA570230, AL041706, AW294985, AA629872, T41259, AA588001, AA700032, AA746659, AI002744, AA346467, AI907530, H25921, T41354, AA812141, AL120086, AA570797, AA601125, AA568198, AL047429, AL138182, AI249473, AA515462, AA515443, AI619436, R99735, AI922803, T47572, AC005034, AL133163, AJ006997, AL133244, AL009174, AC003036, AL035079, AC007193, AC005702, AP000962, AC005296, Z85996, AC005783, AC004217, AL080317, AL034386, AC002067, AP000690, Z84487, AL121603, AC006120, AC006016, AL035411, AC006077, AP000346, Z97987, AC007919, AC002485, AC005031, AC009498, AC004540, AL021367, U95740, U80017, AP000251, AL031848, AF029308, AC006042, Z69917, AC004856, AL121748, AP000030, AL117344, Z73358, AP000511, AC002310, AL109984, AL034350, Z82194, AL023284, AC005014, AC005920, AC008122, AC007666, AC002299, AC000052, AC004019, U66083, AF091512, AC006262, L14752, AC002351, AC007386, AC006196, AC000070,

75	HMAHP16	661600	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 493 of SEQ ID NO:75, b is an integer of 15 to 507, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:75, and where b is greater than or equal to a + 14.</p>	<p>AP001051, AC004967, AC005332, AC005538, AL109854, AP000694, AC005940, AC007011, Z81450, AC004652, AC005202, AL049544, AF196970, Z84476, AC005519, AF126403</p> <p>AL135342, AL135338, AI682468, AI984021, H99774, AW087983, AA911190, AA923049, AI804789, AW269257, AA343320, AA599673, AA906706, AW002696, N28500, AI458578, AI168801, AW002691, AI276029, AI753280, T63417, R99573, N52383, AA350643</p>
76	HCE1D45	664481	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1376 of SEQ ID NO:76, b is an integer of 15 to 1390, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:76, and where b is greater than or equal to a + 14.</p>	<p>AI633731, AA742535, AA928586, AW024580, AI031748, AA287493, AW139368, AA235073, AI342861, AA024783, AI122951, N47975, AA235180, AA936068, AW083549, AA953192, T96536, AW297014, AI554540, R68510, AA287388, T96535, H43420, R75691, AI206677, C05105, AW372944, Z41074, N89741, AI656081, H43421, N74128, AA612838, AI061189, AW021549, AA811399, AW073662, D52513, AI862684, D53036, AA677516, AI382574, M79140, T97144, F03274, AA356468, N89554, R75606, N51175, AC005003, AL096880, A81324, A81326, AF181071</p>
77	HB1BV81	665154	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 768 of SEQ ID NO:77, b is an integer of 15 to 782, where both a and b</p>	<p>AL080003, AW302605, AW178402, AI701581, AI949784, AA506438, AA176780, AW340099, AI810668, AW008216, AI949793, AI570129, AA025230, W37867, AI564486, AI252216, AI499109, AW242964, AI480359, AA774674, AI026080, AA931127, AA126008, AA629404, AI264043, T91992, AW169773, AI350790, AA960795, AA300132, AA134208, AI695964, AI824322, AI377546,</p>



			correspond to the positions of nucleotide residues shown in SEQ ID NO:77, and where b is greater than or equal to a + 14.	AI687600, AA468788, AI380078, AA910317, AI061219, AI915290, AI277301, AA887251, AI298724, AA353348, AA419130, AA937303, AI025658, AA864265, H17773, AA931728, R50817, R27626, AA419069, AA897064, H17656, AI580298, AI521898, AW086126, AA626445, AI918844, F10191, F10115, T63745, R88235, AA721159 W24040, N95428
78	HSXBP02	666790	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 264 of SEQ ID NO:78, b is an integer of 15 to 278, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:78, and where b is greater than or equal to a + 14.	
79	HCQCO19	668040	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 814 of SEQ ID NO:79, b is an integer of 15 to 828, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:79, and where b is greater than or equal to a + 14.	AA837754, AA581115, AC004466
80	HHENT19	668586	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a	AC004998, AF130343

81	HMTMB52	668717	<p>is any integer between 1 to 328 of SEQ ID NO:80, b is an integer of 15 to 342, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:80, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 523 of SEQ ID NO:81, b is an integer of 15 to 537, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:81, and where b is greater than or equal to a + 14.</p>	AA031331, AA447922, AA878870, AA625391, AA026657, AI476276, AA305075, AA148792, AA446846, AW169122, AW149768, AI796276, AA603456, AA090696, AI566470, AA026887, AA455761, AA046950, AA837404, AW196971, AI636657, AA279066, AA321648, AA046476, AI025283, T30865, N40879, AA446847, AA845528, AI879232, AA188287, AA403246, H90077, AA128964, AA031332, H78109, N78226, T36197, AA936074, H37884, AA256024, T34431, T34451, AA308443, W51863, AA568448, AA877372, AI358381, AI351514, AA030022, H27053, AL048514, AF110777, AF151895, AF195950, U21858, I23471 AA916322, AA244285, R57426, T67759, AF161472, AL117545, AL117608
82	HOGAL19	668753	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 278 of SEQ ID NO:82, b is an integer of 15 to 292, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:82, and where b is greater than or equal to a + 14.</p>	
83	HCQAG50	671361	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by</p>	W27182, W31603, W76194, AI057607, AA203214, N43872, AI719074, AW009568, AW418865, R23692, AA136421, H27226, AA055206, AW372559, AW372556, AW372575, AW372567, AW195824, AI057563,

84	HDPLC22	674203	<p>the general formula of a-b, where a is any integer between 1 to 338 of SEQ ID NO:83, b is an integer of 15 to 352, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:83, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 390 of SEQ ID NO:84, b is an integer of 15 to 404, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:84, and where b is greater than or equal to a + 14.</p>	<p>AW372571, I95748</p> <p>AI936345, AA887285, AI678802, AI418187, AW058484, AI978830, AA614465, AI634784, AA508486, AW299537, AI361913, AW299894, AI359657, AI659077, AI718694, AI686164, AA533665, AI469389, T90037, AA878577, AI739343, AA903695, AI934233, AI444978, AA910595, C00551</p>
85	HBMXO90	674745	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1541 of SEQ ID NO:85, b is an integer of 15 to 1555, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:85, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1541 of SEQ ID NO:85, b is an integer of 15 to 1555, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:85, and where b is greater than or equal to a + 14.</p>	<p>AI819368, AW043804, AA995625, AA158255, AI989534, AI632079, AI632177, AW385262, AI436651, AA579669, W92990, AA583087, AA702208, AI767610, AI022894, AI694633, AI687149, AA811023, AW207705, AA043498, AA062551, AA024830, AA043234, AA024786, AI636005, AA063156, AI564317, N99809, AI023039, W93177, AA583864, AA210642, AW388581, AI630114, AW352131, T95281, AW388505, AW016381, AW376106, AW376098, AW082627, AA074329, AW339405, AI479095, AA215346, AB011098, Y08686, AF004830, U27455, X95642, U15555, AF111168</p> <p>AA320525, AW025411, AI653685, AI684617</p>
86	HLMIS22	674761	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by</p>	

87	HE8AG73	677212	<p>the general formula of a-b, where a is any integer between 1 to 441 of SEQ ID NO:86, b is an integer of 15 to 455, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:86, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 661 of SEQ ID NO:87, b is an integer of 15 to 675, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:87, and where b is greater than or equal to a + 14.</p>	<p>AA287561, AA307431, AA331618, AA287878, AF136450</p>
88	HCYBF14	683259	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 479 of SEQ ID NO:88, b is an integer of 15 to 493, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:88, and where b is greater than or equal to a + 14.</p>	<p>AA305210, AW015627, AI580368, AI830042, AI769572, AI741672, AA854575, AI073885, AA834403, AA962811, AA757628, AI923528, N32611, R79828, AW241940, AA961638</p>
89	HKAAS37	685895	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by</p>	

			the general formula of a-b, where a is any integer between 1 to 402 of SEQ ID NO:89, b is an integer of 15 to 416, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:89, and where b is greater than or equal to a + 14.		
90	HBXFP72	688040	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1453 of SEQ ID NO:90, b is an integer of 15 to 1467, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:90, and where b is greater than or equal to a + 14.	AA977676, AA039596, AI871723, AA039597, AI201016, AW338088, AI923596, AW268550, AI016244, AA826433, AA165179, AA876424, AW130871, AI168822, AA743485, AI039963, R81034, AA526606, R80933, AW131872, AA367044, AA278895, AI352299, AI688836	
91	HFIYP15	688044	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1779 of SEQ ID NO:91, b is an integer of 15 to 1793, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:91, and where b is greater than or equal to a + 14.	N71063, W94295, N66037, H63245, AI568915, N73616, AA773642, W02603, AA907572	
92	HEBAG86	688077	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by	AI312130, N98607, AA062994, W52082, W68173, W67714, AI127084, AA406051, AA305034, AA836397, AA978358, AI347575, AA405217, AA764978, AI375843, W90774, AA649214, AA824648, AA258212,	

93	HLDNM81	691124	<p>the general formula of a-b, where a is any integer between 1 to 524 of SEQ ID NO:92, b is an integer of 15 to 538, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:92, and where b is greater than or equal to a + 14.</p>	<p>AI190424, AI719533, AI277627, W24232, AI095177, AA926760, AA927352, AA909449, AA284241, W56767, D54052, F19566, AI342704, H01228, AA514925, AA905893, F36912, D55269, H00845, R95095, F32474, AA887548, AI240810, AA894366, T79247, AA579420, D52953, AA468124, D54053, AI081229, AA947003, T36306, AI597616, AA729251, W90739, F33384, F28057, AI370811, R16001, AI144512, AA988588, AA033634, AA034341, R16102, AA826454, F27110, F31119, D52954, AA631119, AA894720, AI368559, F29378, AA489478, AA483450, F36024, D54336, T31368, T79165, C00350, AA594514, AA062620, N76784, D57671, W56721, H54408, D59289, F00481, F32076, Z24770, AA301716, R05397, AW301847, F25224, AW054814, AA372016, AA485014, AA318851, AI302407, AF047440, AR048128, AA345522, AI908286, AA484151, C20958, AA913510, AI678105</p>
94	HARNC71	691721	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 469 of SEQ ID NO:93, b is an integer of 15 to 483, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:93, and where b is greater than or equal to a + 14.</p>	<p>H92130, AA468843, AA468855, AW244043, AA935265, F13685</p>

95	HE2OC31	693582	correspond to the positions of nucleotide residues shown in SEQ ID NO:94, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 599 of SEQ ID NO:95, b is an integer of 15 to 613, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:95, and where b is greater than or equal to a + 14.	AA425207, AA328348, AI4222986, AW085230, AJ223956, X86000, Y09488
96	HTXKQ20	696007	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 802 of SEQ ID NO:96, b is an integer of 15 to 816, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:96, and where b is greater than or equal to a + 14.	AA167034, AA167085, AA037278, AA114130, AI128866, AA291957, AA009438, AA723387, AA766022, AA299755, AA991579, AA291956, AW160699, AI083889, H38599, AA811428, AI348079, AA635954, AA039390, R34160, R34159, AA009919, AI829155, AA010462, AI081871, AI674507, AI082075, AA039391, AC005041, AL049296
97	HE2OK20	697955	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 563 of SEQ ID NO:97, b is an integer of 15 to 577, where both a and b	AA328692, AW244141, AI435184, AC005084, AC003093

98	HMWIW31	698068	correspond to the positions of nucleotide residues shown in SEQ ID NO:97, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 470 of SEQ ID NO:98, b is an integer of 15 to 484, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:98, and where b is greater than or equal to a + 14.	W01234, AP000500
99	HCEEH33	702853	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 427 of SEQ ID NO:99, b is an integer of 15 to 441, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:99, and where b is greater than or equal to a + 14.	AI436583
100	HAGBL85	703700	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 510 of SEQ ID NO:100, b is an integer of 15 to 524, where both a and b	AI582864, AW138272, AA976107, AA781938, AI093184, AA535789, AI803509, AA412322, AI216808



101	HLWAY38	705461	<p>correspond to the positions of nucleotide residues shown in SEQ ID NO:100, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 600 of SEQ ID NO:101, b is an integer of 15 to 614, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:101, and where b is greater than or equal to a + 14.</p>	<p>AA143160, AA283147, AA142881, N39722, N28707, AA232819, AA233368, AI245977, AI435939, N23044, AI739455, AC007785</p>
102	H2LAN34	705692	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 530 of SEQ ID NO:102, b is an integer of 15 to 544, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:102, and where b is greater than or equal to a + 14.</p>	<p>AA314140, AI623759, AA768701, AW005593, AI420537, H65282, D58283, D80043, D57483, D80253, D80164, D80366, D80022, C14331, D59467, D51423, D59859, D81030, D80391, D59787, D80166, D80195, D59275, D59619, D80210, D51799, D80240, C15076, D80227, D80188, D80024, D59502, D50995, D80196, D59889, D80212, C14389, D80219, D59927, D80269, D80038, D50979, D80193, D59610, D80378, C14429, AA305409, D80241, D80045, C14014, T03269, AW178893, D51060, C75259, D80522, D51022, AW179328, D80134, AW178775, D59695, D80251, D81026, AW177440, AW378532, AA305578, D58253, D51250, AW377671, F13647, AW369651, AW352158, D51079, D80168, D52291, D80248, C14227, AW178762, AW360811, AA514188, C14298, D81111, D80064, AW177501, AI910186, AW177511, C14407, Z21582, AA514186, D80133, AW177505, AI905856, C05695, D80247, AW352117, D80132, AW176467, AW375405, AW378540, D80268, AW179024, AW366296, AW360844, AW360817, AW375406.</p>

				AW378534, AW179332, AW377672, AW179023, AW178905, AA285331, AI557751, AW360834, D51097, AW352170, D80302, AW352171, T11417, D80439, AW377676, AW178906, AW177731, AW178907, AW179019, AW179018, D59373, AW179020, AW360841, AW178909, AW177456, AW178980, AW179329, AW352174, D80014, AW179220, AW177733, AW378528, AW178908, AW178754, AW179004, AW179012, D51103, AW178914, AW378525, AW367967, D80157, AW177722, AW177728, AW179009, D51759, AW178774, AW178911, AW378543, AW352163, C14077, D59627, D58246, AW178983, AW352120, C06015, D80258, D59503, AW178781, T48593, D58101, D45260, T03116, AI557774, AW177723, AA809122, AC012627, AC007204, A62300, A62298, A84916, AJ132110, AR018138, X67155, A25909, Y17188, D26022, A67220, D89785, A78862, D34614, AF058696, D88547, AR008278, X82626, I82448, AB028859, AR025207, Y12724, AB012117, X68127, A82595, A94995, AB002449, A85396, AR066482, AR060385, A44171, A85477, AR008443, I19525, A86792, U87250, X93549, I50126, I50132, I50128, I50133, AR066488, AR016514, AR060138, A45456, A26615, AR052274, AR054175, AR066490, Y09669, A43192, A43190, AR038669, AR066487, I18367, A30438, D88507, I14842, D50010, Y17187, AF135125, AR008277, AR008281, A63261, X64588, AR008408, AR062872, A70867, AR016691, AR016690, U46128, D13509, AB033111, A64136, A68321, AR060133, I79511, AR064240, U87247, AB023656, U79457, AF123263, AR032065, Z82022, A63887, X93535, AR008382 AA195264, AI918088, AI392950, AI991206, N51725, AI140306, AI264604, AW304477, AI800326, AI186691, AI356850, AA489331, AA026607, AI383508, AI523998, AI276615, AA884388,

104	HE2IE28	707161	<p>the general formula of a-b, where a is any integer between 1 to 1873 of SEQ ID NO:103, b is an integer of 15 to 1887, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:103, and where b is greater than or equal to a + 14.</p>	<p>AI356867, AI378377, AI589019, AI361250, AA026719, AA580169, H17664, AA565144, AA514880, AI766245, AA557471, AA632253, W95296, N68920, AI985972, R53701, W95553, AA736984, AI807975, W00561, AW128999, H06890, AA470666, R44101, R19059, Z41259, AI283474, T64963, AA312893, F05870, AA322544, R52922, AI204157, F08182, F02161, T85379, R07731, M96606, F02113, R07732, F05911, AA325154, AA644479, T85478, T92165, F05899, R70373, N51810, AA091065, T93592, AW103327, AA936051, AA876718, H06849, U76421, U76422, AF001042</p>
			<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 239 of SEQ ID NO:104, b is an integer of 15 to 253, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:104, and where b is greater than or equal to a + 14.</p>	<p>H25350, H28544, AI955873, N29938, R12730, AL120665, AW104398, AC000064, AC007566</p>
105	HBXCG73	707464	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 691 of SEQ ID NO:105, b is an integer of 15 to 705, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:105, and where b is greater than or equal to a + 14.</p>	<p>AW390194, W86403, R24772, C75131, AA496772, AW383256, AA322376, AA313543, AW068217, AA232072, AL121084, AI983937, R14521, AW401961, N83156, AA385863, AA285265, AF001628, AF006516, U87166, AF176784, U17698</p>

106	HATAN68	709015	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 906 of SEQ ID NO:106, b is an integer of 15 to 920, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:106, and where b is greater than or equal to a + 14.</p>	<p>AI796967, AW195747, AI740869, AA191594, AI498701, N64011, W86388, AI948435, AI125704, W86389, AI282275, AA887501, D61002, AI197956, H80459, AW204689, AI003139, AA219621, AI985257, H99275, H81379, AA346169, R20553, H05031, R41899, AI912734, T30719, AI197904, AW386705, AA779217, AL046187, T24891, AI864073, AL046188, AA992514, C00222, AW020592, AW020634, AI568293, AI525653, AW020397, AI263584, AI499570, AW023863, AW021178, AW022826, AI538564, AW019988, AI522052, AW023351, AW020931, AW020328, AI636727, AI871660, AW004606, AI884318, AW022308, AI579901, AW152182, N25033, AW020425, AW021693, AW022299, AI557238, AI633125, AW022981, AW020406, AW021182, AI701097, AA282824, AI935799, AI557808, AI909697, AI887381, AI541321, AW023469, AI283760, AI744268, AI524626, AI571439, AW023884, AI915291, AW020629, AI696714, AI525669, AW022593, AI473536, AW021059, AI812091, W45039, AW020480, AW021466, AI359744, AI828682, AW021561, AI590043, AW020876, AI254731, AW020710, AI432030, AW198090, T69241, AI674423, AI932966, N21402, AI810544, AI889189, AL042722, AI536638, AI473150, AW023617, AW020295, AI925502, AW080157, AI866469, AI687362, AI687624, AA830709, N64568, AI282673, AI625256, W74529, AA872507, AI368691, AW105296, AI341690, AI824688, AW022168, AW023955, AI699823, AW021717, AI539545, AA554929, AW021777, AW020403, AW022760, AI613270, AW022874, AI469262, AW021930, AI421903, AW163834, AI582932, AI818980, U06944, AF122922, AL117587, A77033, A77035, L35261, A52184, AL137533, A44314, Z13966, AF200464, AF060555, AF124396, I32738</p>
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107	HAGDD59	709518	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 452 of SEQ ID NO:107, b is an integer of 15 to 466, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:107, and where b is greater than or equal to a + 14.</p>	<p>AA454978, AA132519, AW135352, AA179230, AW024761, AW004924, AI127068, AI985072, N45125, AI867004, AA857184, AI985060, AI361206, R54585, AI272727, AI766581, AI940540, AA923780, Z38507, AW192986, AC004685</p>
108	HBJFI65	711769	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 309 of SEQ ID NO:108, b is an integer of 15 to 323, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:108, and where b is greater than or equal to a + 14.</p>	<p>AI740525, AI800754, AI189295, AA878902, AI262709, AW169159, AA495986, AI469879</p>
109	HSNAL84	711840	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 434 of SEQ ID NO:109, b is an integer of 15 to 448, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:109, and where b is greater than or equal to a + 14.</p>	<p>N40932, AI339840, AW044507, AI216527, AI620878, AW316937, AI292180, AI358083, AI954691, AW006263, AA321122, AA321123, AI654341, N46790, AI953114, N69895, AI970523, AA226346, AA226347, AF196969</p>

110	HCRND41	711878	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 835 of SEQ ID NO:110, b is an integer of 15 to 849, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:110, and where b is greater than or equal to a + 14.</p>	AA442729, AI146478, AL042373, AI792521, AW237905, AI625604, AL135377, AI755214, AI754105, AI754567, R72224, AW151541, AL046519, AI440117, AI792575, AW304580, AW438542, AI335387, AL079734, AI114733, AI133552, AA904211, AA503298, AI380617, T74524, AI627614, AI521525, AW328331, AA831638, AW328202, AI754170, AI053688, AA916430, AI251203, AI251034, AA600202, AW068596, AA700943, AA526542, AI284543, AA456937, AA501461, AW270385, AI859438, AW303098, AI613389, AA714110, AL042667, AL042670, AI251284, AI890324, AA833875, AA833896, AI732483, AA536040, AW069227, AI223626, AL119247, AA524229, AA487226, AA618316, AA593537, AW084445, AI923052, AW069412, AI282253, AA535216, AI278972, AA483606, AA704393, AI687343, AA502991, AA719564, AA533025, H07953, AI799607, AI859946, AA570740, AI473671, AI817658, AW023111, R99034, AI040051, AA828834, AI081147, AA809546, AW089016, AI754767, AI733856, AW026305, AA524616, AA492495, AI309059, AA534064, AI254770, AW243793, AI254779, AA584360, AA603413, AI962030, AI253987, AL041375, AA315361, AI300054, AA659832, AA568204, AW020150, AA595661, AA019973, AA013168, AI499954, R94326, AA747757, AW089625, AW408767, AA581903, AA687730, AA410788, AA630854, AW271904, AA530958, T05118, AI369580, AW238484, AW275432, AI267356, AI745151, AI251576, AA632993, AA814503, AI583142, AI362442, AI003626, AA319233, AI291439, AI537995, AC006239, AC006211, AL031602, AL109627, AF134726, Z84486, AP000503, AP000117, AL096791, AC007565, AL049643, AC004771, AL117694, AL031228, AC007421,
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	AC002302, AP000193, AF196779, AC004975, AC005663, AC004796, AC007052, AC005874, AF134471, Y14768, AC005828, AC007664, AC005261, AP000501, U91323, AL109801, AC004181, AP000961, Z93023, AC006480, Z98884, AC006511, AL136295, AP000505, AL096701, AC004991, AC007216, AC005318, AL049539, AC005099, AC000086, AL079303, AC005037, AC006111, AL133163, AF038458, AC006468, AC004653, AP000086, AC004647, AC005231, AC009247, AL022147, AL109628, AC005225, AC005599, AC002316, AL022326, AL133448, AC006388, AC008372, AC008040, AC005046, AC002301, AL031311, AL049856, AC005971, AC007546, AC005668, AL132712, AL049872, AL035086, AC004196, AL009181, AP000547, AL078477, AC004686, AF045555, AB000876, AL034402, AC002553, AL022069, AC010582, AL109798, AL031587, AL035413, AC004531, AP000497, AC003041, AL031282, AC004156, AC003982, AC005358, AC004019, AC007277, AL021154, AC004832, AL031589, Z94056, AC006450, AF067844, AC005808, AC004882, AC006285, Z69917, AC007371, AL049776, AF165926, Z84572, AC004253, AC005295, AC004859, AB000882, AL034417, AP001053, U91318, AC003037, U91322, Z97184, AC004750, AC005670, Z82215, AC004797, Z98946, AC005821, AC005233, AC002472, AC007731, AC007227, AL031283, AC004673, AC000134, AC005500, AC006312, AL022334, AC002996, AP001052, Z82208, AC012627, AC004596, AC004644, AC005730, AC004804, AC004534, AC007842, AC005535, AC006120, AP000510, AF129756, AP000359, AC005280, AC002351, AC007934, AL122023, AC005538, AF111167, AL035407, AC005924, AC005777, AL049795, U80017, Z98200, AC006538, AC006530, U96629, AL117329,

111	HPXAA41	712638	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 862 of SEQ ID NO:111, b is an integer of 15 to 876, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:111, and where b is greater than or equal to a + 14.</p>	<p>Z97352, AP000694, AC005081, AB023048, AP000104, AL035072, AC004921, AC002352, AF053356, AC005071, AC007036, AC004812, AL034549, AC004805, AC005694, AL021155, AC007388, Z82244, AL031005, Z77249, AC005881, U95742, Z93241, AL049569, AC006057, AC004106, AL109984, AC009509, AP000114, AL031659, AL121603, AC005291, AC007993, AC005666, AL023553, AL034548, AC008044, L78833, AC005183, AC004002, AC005529, AC005013, AC005300, AC006441, AC004560, AL049636, AL049779, AP000211, AP000133, Z83844, AL035400, AL031289, AC005039, AL035659, Z97876, AL021939, Z84466, AC004905, U62293, AC004125, AC004821, AC006430, AL135960, AJ131016, AP000046, AL132992, AC006241, AC005030, AC007406, AC005015, Z99716, Z98751, AC004466, AC004874, AC004966, AC005095, AC005102, AC005245, AC002378, NS0319, AA236194, AA236183</p>
112	HHSFO42	713301	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 862 of SEQ ID NO:111, b is an integer of 15 to 876, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:111, and where b is greater than or equal to a + 14.</p>	<p>AA910497, AI701451, AA429326, AI743089, AI887812, AI005464, AA041483, AI300993, AA315932, H51256, AA425105, AA921331, AA885637, AL043321, AA903224, AI680678, H51826, AI299003, AW014324, W01644, AI809584, AI762128, AI693885, AW167510, AI630969, AI457315, AW341205, AI630807, AI694045, AA928976, AA931651, N71630, AW295247, AA094470, AF147430, D10920</p> <p>F36273, AA654968, AL119691, AI281881, AA515224, AI298710, AW236342, AI358343, AI351698, AI679045, AW079241, AA084070, AI289447, AI654247, AW304805, AI920876, AI688846, AI358813, AW168342, AA661948, AW020992,</p>



	<p>is any integer between 1 to 368 of SEQ ID NO:112, b is an integer of 15 to 382, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:112, and where b is greater than or equal to a + 14.</p>	<p>AI284640, AI192631, AA502103, AA347927, AW276435, AI857789, AI291124, AW193265, AW270382, AA347930, AI567674, AW089322, T08638, AI500454, AA515051, AW265385, T07451, AW089789, AI929531, AI049634, AA665330, AI431303, AA593247, AI625244, AA284179, AI061313, AL043721, AI858451, AA829106, AW029038, AI962050, AI291268, AI339850, AW238278, AI350211, AA555229, AA324849, AA720025, AA594145, AW193432, AW440836, AI434311, AI469003, F26152, H77643, AI251002, AA483034, AI133636, T06828, AA528516, H86305, AA513999, AI567712, AA229785, AW301350, AW303196, AW274349, AA491767, AI151261, AW071196, AW022379, AA482681, AA225155, AW029526, AA349638, AA747472, AA557686, AI087133, N43757, AA723017, AI830390, AI281697, AA828680, AA310158, AI355224, N95820, AI286264, AI475569, AI889781, AI134330, T09071, AA847499, AA642060, AI890923, AI061296, AI358571, T05101, AA584752, AA441788, N63352, AI674873, AI866908, AA629992, AA831527, AA503947, AA917683, AA745582, AA569471, AI281465, AA669416, AI471481, AA085124, AA719805, AA349366, AW339568, AI189932, AW440662, AW166815, AW302013, AA429481, AA747105, H63607, AI619997, AI471543, AW151896, AA213741, AW238542, AA947547, AA483731, AW302450, AA782318, AA826303, N75391, AA493621, AI049722, AW152057, AI672135, R83585, F25867, AA649642, N66945, AA715004, AI287651, AA338642, AI798266, AW021583, F37169, AW162049, N41759, AA594725, AI571562, AW072587, AI435544, T17016, AL043756, AA837740, AA507547, AI312149, AI871722, AI017024, AA782272, AA074130, AA053128, N53150, AA857486, AI801591, AA503283, U51696, AI148245, R95171, AA338522, AA634227,</p>
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AA846981, AL046409, AI824562, AA502155,  
AL045298, AW008952, AW438643, AA679672,  
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M87919, U14711, U14712, AC004941, U14706,  
AC009516, AP000032, U14714, AC002073, U95740,  
AL008629, S77605, U14716, AL050332, D83989,  
AC002526, X55926, X75335, S75337, AL109837,  
AP000692, AC016026, U14705, U14715, AC005578,  
U18392, AC005516, U47924, Z73358, A39972,  
AC004020, AC004821, U57009, AP000555, AC005619,  
AL020993, AC006057, AC005081, AC007848,  
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AC004895, AC004886, AF190465, U18390, AF111168,  
U18399, X55925, AC005747, AL109939, AC005251,  
AC006312, U57006, U18394, U18393, U57005,  
X54176, I51997, X55928, U14707, AC007845,  
AC004907, AC004034, U02057, AC004592, U14700,  
U14695, AC005939, U14710, AL049779, AC006001,  
AL031846, AC004955, Z30993, S70707, Z68881,  
U18387, AL034549, AC008101, Z15025, AC004651,  
AF045555, AC007227, AC006111, AF205588, U14708,  
AL033381, X55923, U18398, U18395, AP000563,  
AL133448, U57008, AC006538, X55932, AC007536,  
AL022318, U02063, AC016830, AF020503, AP000103,  
AL035684, AC006040, AC007387, U14703, U14701,  
AL132987, AL050318, U73024, AC004239, U14702,  
U14684, U14685, U14687, U14699, D00591,  
AF077058, AC006039, AC005288, AL023574, Z22650,  
Z84469, AC004876, AC005215, AC005866, AC000353,  
Z30961, AC005856, AP000497, AC004087, AL031588,  
AL031677, AP000133, AP000211, Z84814, AL022476,  
U49740, M19045, J03801, E01888, E02193,

113	HCEIE94	714156	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1056 of SEQ ID NO:113, b is an integer of 15 to 1070, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:113, and where b is greater than or equal to a + 14.</p>	<p>AP000246, AL096701, AP000207, AP000129, Z99496, AL035214, AC016027, AC006195, AC004531, X55930, AC006251, AC005846, U85195, AP000230, AP000144, AC005041, AP000228, AC010072, AP000255, X54178, AE000658, AC004019, U12582, AL035464, AC005225, AF165147, U14686, U14688, U14689, AP000047, AC007687, Z82976, AL109628, AC008064, AC004453, AL031733, AP000556, AP000557, AC005775, AC004235, AL080316, AP000140, AC007444, AC005703, AL034429, AC007270, AP000135, Z93929, X55922, U67829, AC002072, AC005327, AC005229, AC007488, AL024498, AC005166, AP000031, AL079340, AC005480, AL008721, AL033376, AC005696, AL117258, U18400, AL031427, AC007157, AC007971, AD000092, AC006160, AF064863, AC005035, AC009498, AC005104, AL031985, U62317, AC003688, AP000115, AF121781, AC005105, AL133485, Z84721, X54181, AF070718, AL035071, AL023575</p> <p>H16630, Z46007, R18668, AA779244, AI742776, AA648586, AL049824</p>
114	HWLQA43	714877	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a</p>	

115	HFXHM92	715343	<p>is any integer between 1 to 357 of SEQ ID NO:114, b is an integer of 15 to 371, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:114, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 567 of SEQ ID NO:115, b is an integer of 15 to 581, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:115, and where b is greater than or equal to a + 14.</p>	AA628088, AI640353, AI767467, AI921798, AI810416, AI810681, AI125878, AW073826, AA182773, AI954699, AW293730, AI828389, AI580952, AI313461, AI651050, R49049, AA772043, N33101, AA496896, AA928502, AI031772, AA864471, AI401678, W45009, N93870, T63242, AW194759, AI971721, AI038841, AI979313, AI253064, W32434, AI292264, AI983163, H99107, AI038482, AA604895, AW418876, AW337639, AA461303, AI270459, N50558, AI290061, AI452404, AA099425, AI200622, AA974079, R73465, AI432100, AA081421, AI698923, AI571941, AA480265, AI017448, N64632, AI199075, AA758942, AI982600, T33000, H65188, AI817275, AI684978, N55816, AI827372, AI701353, H28606, AA947626, AA722706, H00447, AI826589, N24348, R55743, H03410, Z41694, F02896, R62185, H45540, N92338, N78793, F26109, N48260, N44922, W38368, AW003189, H00490, AI310166, AI370047, AI313291, AI340484, T90688, R64574, N93394, H45548, F35733, AI308272, AA320558, AA365588, W24522, AA651757, N45701, AA096344, AA099538, N50614, AA083629, AL096842, AB033114, AB020864 W61017, W61009, AA128255, AA806126, AA136365, AA936371, AW150765, AI279977, AA125840, AW448960, AA128312, AA125856, AI186377, AI269647, AI265821, AA873528, AA136280, R07851, R62482, AB031039, AB031040
116	HHSGE44	716212	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 691 of SEQ ID NO:116, b is an integer of</p>	

117	HWLQI33	717222	<p>15 to 705, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:116, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1182 of SEQ ID NO:117, b is an integer of 15 to 1196, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:117, and where b is greater than or equal to a + 14.</p>	<p>AI127903, AI935263, AI741826, AI819372, AI809826, AI524082, AW102619, AI804122, AI540191, AW405122, AI589161, AI860317, AI742839, AA631117, AI809767, AI363498, AA427510, AA480840, AI298899, AI086078, AA847830, AI354791, AI051661, AI675663, AI122706, AI377777, AA503878, AI202112, AI720306, AI394378, AI375978, AA764814, AW406420, AA333282, AI286081, AI298712, AA292572, AI492636, AI867099, AI417659, AI468559, AA971791, AI222922, AA913022, H96909, AA972549, AA992120, AI928774, AW207223, AA814866, AA757376, N35604, AA907092, AW072106, AW166047, AA757394, AI345182, AA457729, AA235704, AW183289, AA430669, Z57528</p>
118	HFIW90	718259	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 961 of SEQ ID NO:118, b is an integer of 15 to 975, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:118, and where b is greater than or equal to a + 14.</p>	<p>H19365, AA286719, N44262, AA447218, AA974582, AC004817</p>
119	HOSEP43	719629	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by</p>	

120	HUSGY48	721985	<p>the general formula of a-b, where a is any integer between 1 to 317 of SEQ ID NO:119, b is an integer of 15 to 331, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:119, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 219 of SEQ ID NO:120, b is an integer of 15 to 233, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:120, and where b is greater than or equal to a + 14.</p>	AA731436, AA505796, AA528524, AA886535, AI802907, AA973692, F26324, AA176725, AA658895, AI914394, AI392630, AI389999, AI123694, AA977864, N64163, AA359165, AA975366, AI126532, AA916014, AI832970, AI351443, AA888167, AI093884, AA973611, AI833308, F33502, AW264528, AI709250, AA594324, AI039168, F33691, AA404535, AA340839, AI814033, AI682171, AI719390, F32392, AA680411, AI268514, F10345, AA704675, R38445, R00088, T90966, R02355, AI742966, H79632, R38577, Z20180, D19917, AW419258, AI963625, AI345416, AI345612, AI345415, AL036705, N99088, AL041150, AA715307, AA809974, AL037582, AL037602, AI590043, AI699011, AI364788, AI623535, AI064830, AW161156, AL079728, AA761557, AL042544, AL036403, AI432644, AI581033, AI358701, AL110306, AW161202, AI929108, AW163554, AW020710, AL121270, AA748353, AW082113, AI866465, F30529, AI500061, AW440167, AL045500, AL119399, AI269862, AL046466, AI923989, AI249877, AW403717, AI582912, AI538885, AA641818, AL036631, AL038605, AL036638, AI567582, AW162194, AL043168, AW071417, AI698391, AW151136, AI538850, AI285439, AI582926, AI801793, AW087445, AI433157, AW020373, AI554821, AL121328, AI923509, AI539771, AI859991, AI537677, AL047763, AW021717, AI500659,
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	AI815232, AI801325, AI500523, AI582932, AI284517, AL043089, AI500706, AI491776, AI445237, AW151138, AI521560, AI889189, AI500662, AI284509, AI889168, AL120695, AI866573, AI633493, AI434256, AL110402, AI888661, AI284513, AI888118, AL037454, AI909696, AI340519, AI355779, AI440252, AI624543, AW117882, AI473536, AI433037, AW088899, AL038529, AI307557, AW059828, AW009337, AI344817, AI859464, AI335208, AI340603, AW051088, AI689420, AI620284, AI539800, AI251830, AI273179, AI805769, AL119457, AI919593, AA572872, AW129264, AI866581, AL119791, AI866469, AI345467, AW020419, AW160916, AI889147, AI537617, AI349598, AI621341, AI824576, AI241923, AW269097, AW163464, AI539153, AI371251, AW020406, AL043981, AI698401, AW083804, AI648567, AI690946, AL039276, AI344910, AI335363, AI969655, F35299, AI916419, AI623736, AI699865, AI624293, AA768046, AI494201, AL133741, AI683492, AL045163, AL036274, AL037030, AL042745, W38553, AI891125, AI828583, AL042628, AI887775, AI872423, AW172745, AI440239, AI611743, AW020876, AI568114, AW172723, AL042382, AI440263, AI584140, AL046618, AL041772, AI434242, AI500714, AI436429, AL039086, AW162189, AI254727, AI590943, AI371228, AI312210, AI473451, AI491710, AL043152, AW160905, AI344785, AI559872, AL047422, AI863197, AF044957, AR043114, X64898, A74894, I33392, AL137529, AL137480, I48978, AL117648, A65341, AL117460, I09499, AL137533, AF026816, AL133067, AF017437, A65340, A58545, AL049430, AL122100, AF106657, U96683, A08916, A08910, A08909, AB016226,

	AF126247, I89947, A08908, AF158248, A86558, U87620, AL137521, AR038969, AR034821, AL137479, AF090943, AL133072, A08913, AL122049, AJ012755, X92070, AL080148, AL133606, AL049382, AL049314, AL117457, AL137557, A08912, X06146, AJ006417, U49908, AL137463, I48979, AJ000937, M27260, S76508, AF078844, AR013797, I89931, AF111849, S68736, AF002985, AL133049, I49625, AF047716, AL117463, AL049938, AF031147, U58996, AL117435, AL080074, AL122050, I42402, U49434, AF146568, AL096751, U88966, I79595, AL122110, Y10823, AF118094, AL133080, A83556, AL137459, I17544, A03736, U72620, AR020905, AF113694, AF113019, AF090934, AF028823, Y11254, AL080234, AL122098, AF185576, X83508, AR038854, Y11587, X82434, E03348, Y16645, AF067728, X79812, AL049283, U95114, AF118070, AF065135, A77033, A77035, AF087943, A93350, AL137711, AL050116, AF113676, AF177401, X65873, U35846, AF102578, AL122121, AL035458, AL080124, AF111112, U67958, X84990, AF125948, AL110218, A18777, AR068753, AL137640, AF132676, AF061836, AL117583, E06743, AJ238278, AF017152, Z37987, AL080127, E07108, AL096744, AL133568, AL122118, AL133031, AF091084, AL049466, AF111851, AF090886, AL133010, AF104032, AF113013, I00734, E07361, AF100781, AL133637, X56039, X80340, AR029490, U90884, AL137271, AL133081, AL050172, AF210052, AF176651, AL137550, E00617, E00717, E00778, AL137547, AL137294, AB008792, E02221, S78214, I68732, AB008791, I89934, U77594, S61953, AF119337, X66862, Y10936, X62580, AL117416, AF079763, U55017, AF026124, S69510, AF125949, S77771, AL133077, AL050155, AL133619, L04504, AF008439, AL122123, X72889, A58524, A58523, AL133560, AL133093, I26207, AL110196, AR000496,



121	HSLEC18	722249	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2029 of SEQ ID NO:121, b is an integer of 15 to 2043, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:121, and where b is greater than or equal to a + 14.</p>	<p>U39656, A76335, E02349, AF183393, Y14314, AL023657, AF090901, X93495, AL133565, AF113691, A08907, AL050277, I09360, AF118090, AB007812, AL133075, AL110158, AF090900, AL133014, AL117394, AL050138, AL050393, E15569, X53587, AL034417, AL133640, AL117585, AL110221, AF061795, AF151685, AF058921, AL137658, AL133665, AL133113, A23630, AF079765, AC002467, AC004485, AF067790, Y10655, AF113689, S36676, AL050024, AF113699, AL137560</p> <p>N37065, AA826487, AA339231, AI733856, AA904211, AL138182, AA502991, AW328000, AI815210, AW026305, AI421950, AI419337, AA120920, AI696878, AI361090, AI573198, AA425924, AA503298, AL038842, AI859438, AA812684, AW238253, AA714110, AI962030, AL042373, AI612142, AA578621, C06004, AI799569, AW341978, AA832175, AA765925, AA483256, AA857812, AI049955, AA515728, AW327624, AI752365, AL047349, AI689198, AI025930, AA182731, AI904840, AI362442, AA846923, AA613624, AA598892, AI653776, AW274191, AA652834, AI762528, AI887235, AW410784, AA349193, AA833896, N73724, AA833875, AI583252, AI247101, AW082104, AI340832, AA302812, AA993636, AA664604, AW088631, AI306232, AI925065, AI823705, AW089016, AI824476, N68449, AW440368, N23504, AA228349, AW190484, AA595499, AL048275, AI207424, AA832444, AA548610, AL079734, AI583466, AA493226, AL118991, AI431513, AL037632, AA828047, AW081303, N41775, AI360558, AI275982, AL041375, AI821987, AI251576, AI610737, AI732869, AL031602, AC005231, AC007292, AL031311, AC005081, Z84466, AC004922, AC006211, AC002316, AF196779, AL133371, AL022723, AC007542, AL035414, U80017, AF030453,</p>
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 AP000245, AL034379, AL049540, AC003667,  
 AF207550, AC004821, Z82198, AC005037, AC005099,  
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 AP000501, AL079301, AL035587, AC005512,  
 AF139813, AC006547, AC004813, AF184110,  
 AC003025, AL031289, Z93023, AP000555, X54486,  
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 AC005786, AP000065, AC003029, AP000553,  
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 AC006530, AC012627, AL035455, D88270, AC009516,  
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 AC005921, AL034549, AP000275, Z93241, D86992,  
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 AL034376, AC005003, AC007371, AL049757, U63721,  
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 AC005399, AL133246, AC007298, AC005548,  
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 AL049643, AC005881, AC003950, AC006581,  
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 AC004814, AC006261, AP000692, AC005011,  
 AC005209, AC006468, AC006312, AL022165,  
 AP000212, AP000134, AF001549, Z99716, AL121658,  
 U82668, Z98051, AC002115, Z98884, AC002347,

122	HUFAC36	722258	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2863 of SEQ ID NO:122, b is an integer of 15 to 2877, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:122, and where b is greater than or equal to a + 14.</p>	AC004865, Z83844, AC005207, AB003151, AL035659, AP000688, AL139054, AC004983, Z69707, AL022320, AL049764, AC006057, AP000105, AP000037, AC006512, AC005480, AC000097, AC008115, AC002072, AC005899, AC006942, Z73417, AF102137, AC005318, AC003982, AP000310, Z97054, AL096766, AC002400, AC000026, AC005358, AP000289, AC002369, AC007216, AL021878, AC005777, AL079342, AL031729, AC006120, AP000354, AP000210, AP000132, AC004797, Z94721, AL023284, AB020873, AP000042, AP000110, AP000514, AC007277, AL035460, AC005300, AL049712, AC005932, AC005972, AP000350, AC007227, AC005900, AC005953, AP000213, AL022319, AC003037, AR036572, U91328, AC006013, Z85996, AC007649, AC006344, AL121934, AL021154, AL110502, AC005378, AC005544, AP000356, AW361997, AW362047, AW364154, AW362053, AW364497, AW363892, AI828567, AI560739, AW362017, AI559571, AI961395, AI922922, AI858291, AI601204, AI623850, AI679451, AI478715, AI922711, AI858408, AI457140, AI978816, AW150719, AI862126, AI923293, AI935885, AI870181, AI858824, AA588739, AA916673, AA55066, AW008365, AI860756, AI812031, AI923408, AI636160, AI827323, AW338713, AW150078, AI635039, AI420765, AI554505, AA582775, AI564401, AW177640, AW151832, AI433333, AI274367, AA418161, AI955997, AI640719, AI625261, AW191047, AI857830, AI588841, AI721066, AI858311, AI683781, AW361718, AI581904, AI373075, AI628535, AW364741, AI564624, AI587610, AA652197, AA553882, AI859018, AW193154, AI858269, W52120, AI445544, AW062541, AI659775, AI859238, AI417458, AW338495, AW298327,
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	AW364615, AW364573, AW351747, AI799729, AI565909, AI963778, AW192191, AI564392, W53028, AW363898, AW375899, AI799381, AI275979, AI559141, AW351538, AW364165, AI811969, AI867651, AI648422, AI422584, AA376957, C02400, AA366895, AA377282, AI669320, AI811793, AI933548, AA295047, AA417910, AI537846, AA372630, AI833145, AI824496, T34936, AI699868, T35412, AW002752, AI832493, AI982524, AI805205, AI985980, AI648451, AW376236, AA531507, AW376235, AI933787, AW366558, AW365133, AI601121, AW364616, AI659355, AW364639, AI561337, AI866055, T24880, AW351876, AI833173, AW364580, T24837, T35699, AI418084, AW364778, AW378106, AI588899, AW375551, AI564245, AW362832, AI540524, AI568068, C06052, T24521, AW361270, T24449, AI553666, AW364574, AW374350, T24582, AI721090, AI973152, T25155, AI635639, AW360840, AW364785, AI860027, AI669171, AI453248, AI690813, AI540674, AI538829, AI572717, AI918677, AI796743, AW105431, AW087191, AW194014, AL045496, AW089844, AI927233, AA937566, AI873550, AI049669, AI491775, AI537191, AI559752, AI683270, AI918809, AI699865, AI445829, AI342710, AI081740, R40363, AW083573, AI500658, AI630932, AI590043, AI440238, AW084396, AW103628, N25033, AI471909, AI621341, AW029216, AI815232, AI863002, AW105460, AW084896, AI539260, AF097021, I68732, AF026816, AF090903, D83032, U89295, X89602, AF199027, AF069506, AR022283, AR029490, AL023657, AF115410, AF061795, AF151685, AF017437, I89947, AL137537, AL049938, AF185614, AR038854, AL050277, X06146, AF124396, A60092, AL133665, A60094, AF031572, A77033, A77035, U87620, E12747, A21103, E03671,

123	HHFHB49	723136	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 667 of SEQ ID NO:123, b is an integer of 15 to 681, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:123, and where b is greater than or equal to a + 14.</p>	<p>AR068466, AL117438, AF040723, U38419, AF060555, AL133558, AF080068, AF200464, AL122121, AL133623, AL080139, U86379, I22020, AL080234, AL137281, AF161413, AL137550, AF167995, A08912, AF106657, X93328, AF008439, A08911, A65341, E12580, A93914, AL133047, I32738, X68497, X97332, AL137533, X83544, AF060866, AL133557, S76508, AJ001388, A15345, A26498, E12888, S63521, AF067728, AL117416, AF080622, S73498, AF102578, A58545, AR050959, AL133067, A07588, AF038847, X80340, AF026008, A21625, AL137665, AL080163, Z35309, AL049276, AL122103, AF090943, AF109683, I33392, AL117460, Z97214, A18777, A08907, AL080124, Y18680, AF087943, X70685, X72624, AF111849, U31501, AR034821, AF032666, A12522, AF111112, AF098484, AR066485, A76335, X52128, AL137554, AL110221, AF177401, AF054599, X52220, AL137548, AL136884, AF161699, Y16645, AB031064, AL080146, U57715, Z82022, AL133075, AF124728, AL137284, AF029750, AL133031, AF061943, X82397, AL109672, AL117626, AL049423, AF141289, M85165</p>
124	HFIBH05	725110	<p>Preferably excluded from the present invention are one or more</p>	<p>AA054421, T24430, AW206410, AI660910, AC004202, AP000518, AB023054, Y07828</p> <p>AA625451, AI089287, AA282874, AA398984, H72493, AA137263, AI434776, N33821, AA482849, H79114,</p>

125	HKIAA57	725201	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 592 of SEQ ID NO:124, b is an integer of 15 to 606, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:124, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1197 of SEQ ID NO:125, b is an integer of 15 to 1211, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:125, and where b is greater than or equal to a + 14.</p>	<p>R23405, R25093, AI983837</p> <p>AA166776, AI741792, AI675413, AI620910, AW027395, AI799988, AA659728, AA883923, AI361118, AI694798, R39993, AI421599, AI421231, AW299501, D53031, AI193736, AA166749, R73993, AA306989, D59334, W21931, AA918493, R73900, AA059363, AI368574, T10593, AA476990, R43798, AA410954, T10567, AB020676</p>
126	HRKAB52	726122	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 867 of SEQ ID NO:126, b is an integer of 15 to 881, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:126, and where b is greater than or equal to a + 14.</p>	<p>AL047265, AI733029, AI810538, AI291282, AI346511, AI288746, AI340353, AI318112, AI301846, AI304527, AI274206, AA878571, AI147583, AW204451, AW129463, AW075794, AI830488, AA812848, T68446, AA732362, T93796, AI720888, AA906537, AI681040, Z79996, AC002394, AC006059, Z95126, AC007198, AL022336, AC007065, AC004220, AC002980, AL024493, AC005549, AF181449, U91325, AL021182, AC007380, AC005228, Z82205, Z83826, AC004551, AC003119, AF039905, AP000292, AP000043, AP000111, AL008626, AC002992, U80460, AC004088</p>
127	HPCAN95	727365	<p>Preferably excluded from the present invention are one or more</p>	<p>AA007664, AI803958, AI167454, AI968968, AI247561, AA148881, AA007627, AI375078, W23292</p>

128	HCQCV54	729143	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 903 of SEQ ID NO:127, b is an integer of 15 to 917, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:127, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1273 of SEQ ID NO:128, b is an integer of 15 to 1287, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:128, and where b is greater than or equal to a + 14.</p>	<p>N45700, H63509, H54749, AA789241, AI073405, AL137699</p>
129	HLJEA54	729231	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 589 of SEQ ID NO:129, b is an integer of 15 to 603, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:129, and where b is greater than or equal to a + 14.</p>	<p>AI079148, AA532656, AP000548, AL031120, AP000365</p>
130	HTWCR70	731881	<p>Preferably excluded from the present invention are one or more</p>	<p>AI246796, AA847499, AL047080, N22516, AA504694, T40848, R91796, AA492015, AA503468, N70293,</p>

<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 518 of SEQ ID NO:130, b is an integer of 15 to 532, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:130, and where b is greater than or equal to a + 14.</p>	<p>AW024018, AW028943, AI886629, F04766, AL038901, AI249688, AI491828, AL038533, N23846, AI963045, AA515138, AW274182, AI916406, AW302711, AA535937, AW439480, AA488746, AA515727, AJ246003, AC006241, AC007421, AL121658, U91323, AL109623, AC002558, AL096701, AL009181, AC002551, AC006449, AC005480, AC007055, AC004382, AL035086, AC007283, AC004263, AC007546, AC002091, AC000379, AC003101, U95742, AC005527, AL139054, AC005399, AL049829, AC004983, AC005529, AL050307, AP000553, AF196969, AC005488, AC005225, AL133245, AL049576, AC005015, AC007225, AL022165, AC004638, AC004703, AL031432, U91321, AC007216, AC000353, AC000025, AC007050, U62293, AC007637, AC002565, AL080243, AL121603, AC005231, AL049830, AF109907, AC005537, AP000692, AC005288, AC004131, AC005180, Z95113, AL022476, AF196779, AC002312, AL109758, AC005920, AC016025, AC005914, AL031588, AC004408, AC006120, AC004686, AL096791, AC004491, AL009183, AC004858, AF134726, AC004383, AC005520, AC004859, AC004813, AL049843, Z98941, AP000212, AP000134, AC005089, Z83840, AC006211, AC006960, U96629, AC005091, AF001549, AC002300, AC006157, AC002288, AC004883, Z98884, AC007151, AC004953, AL031680, AC005933, AC005081, AC007666, AL079342, AC002470, AC004967, AL035413, AC005257, AP000030, AC003043, AC007227, AL031985, AC004257, AP000248, AC006088, AL031577, Z82244, AL022318, AC004999, AC002996, AC005823, AC005972, AC005280, U80017, AC002070, AC004820, AL023807, AC006530, AC007226, AC002310, AL049692, AC004675, AL133382, AL133163, AL031283, AC007114, AL049776, AC006111, AL109613, AC004019,</p>
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		<p>AL031984, AC006312, AF053356, AC007371, Z98051, AL034548, Z97055, AC006141, AP000141, AC005702, AC002352, AL078638, AC005632, Z95152, D87675, AL109628, AC005839, Z82201, AC005740, AC005932, AF001552, AL049872, U82668, AC005207, AC005412, AP000065, AC002045, AC004812, AC004134, AC006121, AC005264, AF165926, AC002477, AC004106, AC004531, AL050341, AL022238, AC004583, AC006538, AF111168, AC004217, AC005037, AC005829, AC007124, Z84469, AF067844, AL020997, Z84480, AL035420, AL049709, AL024507, AC004955, AC005082, AC006501, AC000159, AC004596, AC005484, AC005210, AC006441, AC002059, AL031311, AC004098, AL135744, AC006254, AC010205, AL035461, AC000004, AC004991, AF139813, AC012384, AC007370, AC005531, AL049780, AC005874, AF134471, AC016830, AL031685, AL021546, AL035400, AC005776, AC003002, AC002400, AL132642, AL021938, AP000689, AC007685, AC004685, U47924, Z84466, AL034555, AF207550, AL031602, AB003151, AC005031, AC008372, AL049869, AC009731, AC000052, AL022323, AC003071, AP000211, AC002126, AC004067, AL122023, AL133448, AC009721, AP000555</p> <p>H19388, AA121710, H12126, AA429913, AA446069, AW104301, AB002349</p>	
131	HSXDD55 732280	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 762 of SEQ ID NO:131, b is an integer of 15 to 776, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:131, and where b is greater than</p>	

132	HSTAB63	732932	<p>or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 675 of SEQ ID NO:132, <math>b</math> is an integer of 15 to 689, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:132, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	<p>AI633551, AA825156, AA459252, AA379178, AA193434, H84915, AI478844, AI572369</p>
133	H6BSI11	733034	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 541 of SEQ ID NO:133, <math>b</math> is an integer of 15 to 555, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:133, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	<p>AI654484, AI675680, AA779583, AA922674, AA776643, AI927651, T65302, AI802381, AI004237, N29771, T16284, AW117573, AI688100, AW299953, AA468748, AI095730, AW137454, Z38671, T30227, AA627776, AI474940, F09810, F04332, AA373631, AI916074, AI810865, AI682308, AI522209, AA190709, AI766752, AW139240, AA095317, AL122036, X99270, U82695</p>
134	HDQPP57	734012	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 776 of SEQ ID NO:134, <math>b</math> is an integer of 15 to 790, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:134, and where <math>b</math> is greater than</p>	<p>H80171, AA971126, T80926</p>

135	HAGEX59	735603	<p>or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 1394 of SEQ ID NO:135, <math>b</math> is an integer of 15 to 1408, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:135, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	<p>W39020, T74318, H23063, Z43413, F12669, AA436729, AI138441, AI400746, AL035409</p>
136	HAVMG19	739061	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 888 of SEQ ID NO:136, <math>b</math> is an integer of 15 to 902, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:136, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	<p>AA043107, AA460757, AA808519, AA482341, AW088728, AL041651, AI305256, AA885398, AI808361, D53182, AI689925, AI123220, N99552, AW130266, AA861771, AA040860, AI278439, AA134816, W87524, W89049, AI301074, AA927150, W87525, AI086181, AI683247, AI633628, AI301808, AW236826, AA339816, AA649134, AA806264, AI078052, AA460158, AA909561, R46365, R54321, AI472152, T23855, AI769853, AW074642, W57681, AA039402, AW072224, T80969, AA991845, AI472163, AI831540, AI686045, AA716427, AA029761, T97173, AI738802, T81108, R67010, AA482244, W89104, R49077, T40888, AI583709, N71544, AB028951, AL122055</p>
137	HLEAL50	741134	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 716 of SEQ ID NO:137, <math>b</math> is an integer of 15 to 730, where both <math>a</math> and <math>b</math> correspond to the positions of</p>	<p>AA745961, AI110640, AA581433, AW419403, AL119355, AA843874, AA309370, AI439860, AI887321, AW130042, AA174085, AI110720, AL133942, AW177226, AA601264, AW177120, AI818151, AW150375, AA152091, AW089864, AI925647, AW157413, AI983921, AI927861, AI367384, AI858607, AA493735, AW089655, W03759, H97952, AI811494, AW190486, AI761656, AI685116, AW167319, AI610776, AA679519, AI688902,</p>

			nucleotide residues shown in SEQ ID NO:137, and where b is greater than or equal to a + 14.	AI732743, AA493998, AL137994, AI872415, AI264673, AI334099, AA136637, AA659014, AL044349, AA189081, AA130536, AA773359, H64113, AI924175, AA767353, AA631430, AI874256, AW177231, AW235478, N24958, AI088796, W49501, AW090739, AW090210, AI801377, AW151307, AI749571, AI376984, AI817158, AA778304, AI082077, AI433018, AI735074, AI675848, AI819528, AI568919, AI862874, AL041411, AI147839, N64574, AW074001, C06012, N76274, TI6214, AA598786, AA932087, AI963795, AW167452, AI627862, AI479035, AA427754, AI860964, AI499811, AW440317, H90881, AW073349, AI110786, AI189033, AI121916, AA130476, AA152017, AI590151, AI733728, AA663566, W87732, AI811854, W58442, AW084901, N26540, N79242, AL036881, T69719, AL041417, R80440, AI250812, AI418614, AW168798, AI346802, AW242735, AI591192, AW139132, AI628043, AA868708, AA055654, AA953572, AI499286, AW004844, AA287329, AI091583, AI114529, AA346162, AA176355, AL133889, AA501873, AA807609, R91915, AI133073, AI570877, AA709024, AI557354, AA878800, AI375534, AA911409, AI135303, AW242205, AA470572, AI246569, H12832, AA946637, AI832184, R48563, AI453790, H91008, AI110627, AA654837, AL043039, AA081993, AI025602, AI272961, T41165, M62281, H73189, AA854527, AI560839, AI696653, AI921101, AI632138, AA889273, AI538654, AW083198, AW102963, AI095849, AA363058, AI973178, T69889, T06932, AA862481, AA524883, AI862212, AA771730, R94240, AA825161, AI291353, AC008394, AL079352, AL031663, AL136018, AL109799, U20230, AL049794, AF064866, AC008064, K00628, AC003082, AC004467, AL049561, AC005194, L29074, AC009320, AP000687, AJ229041, AC005138,
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	AL117339, AC005034, AL031903, AC004070, AL049734, Z80107, AL022401, AC007370, AL122126, AC005951, AC003081, AC007671, AC003686, AC005939, AC005016, AL022576, AL132718, AL035411, AC005823, AC006362, AL022397, AC008082, AC006070, Z75741, AC004081, AF198095, AC007372, AC005509, AC008170, Z81001, AC010168, Z81007, AC006561, Z76735, AC004750, AL035088, Z83827, AC010382, AC004647, AF020802, AL009173, AL031676, AC004957, AC006484, AC002556, AC004063, AC003969, AC006578, AC007319, Z83820, AC004454, AL121578, AC006371, AF064864, AC006197, AL033403, AC006037, AF064860, AL034399, AC006032, AE000659, AC004057, AL034369, AC000377, AL133512, AL049837, AC005045, AC006971, AC000114, AL009172, Z99495, AC005213, AC009479, Z82899, AC006206, AC006226, AC005392, AL133381, AC004538, AF128525, AC005610, AC007243, AL050306, AC002288, AL050308, AC004470, Z96810, AL009174, AC005386, AL021326, AC003016, Z93928, AC004959, AJ006345, AL030996, Z83819, AL033521, AL096829, AC004048, AL121767, AL033397, AL049546, AF165142, AC005859, AC006946, AP000473, AL031655, AL034403, AL021068, AC006144, Z98255, AC006548, AL022161, AC002524, AL049564, AB033055, AL109759, AL049775, AC010849, AC007110, Z70225, Z82242, AC007543, AL049565, AL049828, AC004783, AC005352, AC004911, AL078474, Y10196, AL121782, AC006316, AL109662, AL133249, AL009176, AL049691, AF188025, AC004535, AC006455, AC007090, AC002367, AJ006343, AC004820, AC004907, AL008710, AL034408, AL031673, AL031985, AP000536, AC007364, AL023283, AL022151, AC005221, AC007450, AC005017, AC005066, AP000474, AC004869, AC004415,

138	HCPAC07	741257	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 510 of SEQ ID NO:138, b is an integer of 15 to 524, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:138, and where b is greater than or equal to a + 14.</p>	<p>AC004158, AL133239, AL121838, AC006112, AC006324, AL022577, AC007402, AC004674, AJ272265, AC002526, AL022146, AC002452, AC006504, AC004082, AC005184, AC008009, AL033379, Z72001, AF002991, AC002478, AF165175, AC005201, AL031114, Z70232, AC002070, AC004949, AC004831, AL049642, Z94055, Z70049, AP000014, AC004128, AC004006, AC007971, AL117326, U80460, AC000111, AL049710, AC003693, AL096773, AP000454, AC000056, AC005873, AP000127, AP000205, Z75747, AL121757, AP000948, Z84720, AL034561, AC004917, U58675, AC006002, AC007535, AL035427, Z92545, AL049176, AL031782, AL031586, AC005271, AC005050, AL117325, AL079303, AP000244, AC002422, AC007628, AC004130, AL109753, Z69649, AP000496, AB023054, AC004677, AA729528, AI659354, H92153, AI609659, AC007842</p>
139	HOSEQ61	741804	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 855 of SEQ ID NO:139, b is an integer of 15 to 869, where both a and b</p>	<p>AI191412, AI917623, AW188995, AI817093, AI682959, AI352688, AI684692, AI921724, AI742357, AA932743, AI920893, AI056062, AW080580, AW264806, AI684110, AI399967, AI288672, N47530, AI025387, R37474, AI399768, AI082088, AI051895, AI670819, AA992114, AW172410, AA804760, AI277609, AI419244, AI581273, AW264450, AI690471, AI201792,</p>

140	HCROB09	742220	<p>correspond to the positions of nucleotide residues shown in SEQ ID NO:139, and where b is greater than or equal to a + 14.</p>	<p>AI399766, N33170, W81125, AI340265, AI493707, AI084302, AI332758, AA844314, N31479, AW292367, AI189730, AI859908, AI948737, AI767971, AA705987, AI191915, N41400, AI018756, AA565532, N30867, AI745148, AW105295, AI027158, AI144295, AI022551, AI309544, AW269664, W03596, AI090397, R69094, R62166, H01454, N27383, AA621513, N73725, R94744, AI872694, H01545, AI766098, AL045562, AA080893, AA398232, Z41084, T96725, AW007944, AA397773, T71202, R62783, AI597714, AI758208, T77857, F02096, AA305022, R81325, T96614, R62275, AA551281, AA488147, AI198007, W00988, AI972024, R23285, R17669, AI912150, R37498, T77937, AI190624, W15297, AI280919, AI371283, AI474959, N74651, R36502, R23384, T81872, AA318570, W30888, W03896, R81574, AW087832, N44953, R69209, AW081569, AA844599, C20575, D45749</p>
			<p>preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 572 of SEQ ID NO:140, b is an integer of 15 to 586, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:140, and where b is greater than or equal to a + 14.</p>	<p>AA398573, AA393505, AI024045, AA356950, AA309852</p>
141	HFIZP62	744605	<p>preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 600 of</p>	<p>AA464640, R50867, R52013, AA291200, AA311694, AA280919, AI915836</p>

142	HBMTK19	744687	<p>SEQ ID NO:141, b is an integer of 15 to 614, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:141, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 560 of SEQ ID NO:142, b is an integer of 15 to 574, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:142, and where b is greater than or equal to a + 14.</p>	AA405898, AA878188, AW029177, AL046524	
143	HAGDC84	745368	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1998 of SEQ ID NO:143, b is an integer of 15 to 2012, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:143, and where b is greater than or equal to a + 14.</p>	AI435489, AI168436, AI660093, AI917105, AW170015, R69799, F11334, R67877, F11323, D51015, R69800, R81389, R81390, R34017, AI283968, F08994, F08984, R67878, R33479, T16467, D80391, D80196, D58283, C14429, D80253, D80166, D80195, D51423, D59927, D59619, D80210, D51799, D59859, D80240, D80227, D80212, F13647, D59889, D80188, D81030, D80219, D80269, D80038, D80043, D80193, D50995, D80366, D80022, D59275, D50979, D80045, D80024, T03269, D80378, C75259, D57483, D59502, C14014, D59610, C14331, D59787, D80134, D80241, D59467, D80164, D80168, C14389, D81026, D51060, D80268, D51250, C15076, D58253, D80949, C14227, AW178893, AA305409, D81111, D51022, D51079, AI910186, AW177440, AW179328, AW178775, AW378532, AA285331, AA305578, D80522, AW352158, Z21582, AI905856, D80251, C14407, D59695, AW377671, AW369651, D51097, D80248,	



AW178762, AA514188, AW177501, AW177511, D52291,  
AI557751, D80133, AA514186, C14298, AW360811,  
D80132, AW360834, D80064, AW352117, C05695,  
AW176467, AW375405, AW378540, T11417, D80014,  
AW366296, AW360844, AW360817, AW375406,  
AW378534, AW179332, AW377672, AW179023,  
AW178905, AW179220, D80302, AW352171, D80439,  
AW377676, AW178906, AW352170, AW177731,  
AW178907, AW179019, AW179024, C06015, D59373,  
D80247, AW177505, AW360841, AW179020, T02974,  
AW178909, AW177456, AW179329, AW178980,  
AW177733, AW378528, AW178908, AW178754,  
AW179018, D51213, AW352174, AW179004, AW179012,  
D51103, AW178914, AW378525, D80157, AW177722,  
AW177728, AW378539, AW179009, D51759, T03116,  
AW178774, AW178911, AW378543, AW367967,  
AW352163, AW178983, AW352120, AW178781, T48593,  
D58246, D80258, AI557774, D59503, AW177723,  
D59653, D58101, D45260, D59627, C14344,  
AW177508, AW367950, H67854, AI535850, C14975,  
AA809122, C03092, AA033512, H67866, AW378533,  
C14973, AW178986, AI525923, AW177497, AI535686,  
AI535961, AW177734, AI525917, D59317, D51221,  
D59474, AI525920, D60010, AA514184, D45273,  
D59551, C14957, D60214, D50981, AI525227,  
C14046, AI525235, A62298, A84916, A62300,  
AJ132110, X67155, A67220, D89785, A78862,  
A25909, D26022, Y17188, D34614, AR018138,  
D88547, AR025207, X82626, X68127, AF058696,  
AR008278, AB012117, AB028859, I82448, A85396,  
AR066482, A85477, A44171, I19525, A86792,  
Y12724, X93549, A82595, U87250, A94995,  
AR060385, AF135125, AB002449, AR008443, A30438,  
I50126, I50132, I50128, I50133, AR064240,  
AR066488, AR016514, AR060138, A45456, A26615,  
AR052274, Y17187, X64588, Y09669, A43192,

144	HCABQ86	747870	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 544 of SEQ ID NO:144, b is an integer of 15 to 558, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:144, and where b is greater than or equal to a + 14.</p>	<p>A43190, AR038669, AR066487, AR066490, AR016691, AR016690, U46128, AR008277, AR008281, AR054175, D88507, I14842, I18367, D50010, A63261, AB033111, AR008408, A70867, Z32749, AR062872, U79457, D13509, A64136, A68321, AR060133, I79511, S69292, U87247, AB023656, AF123263, AR032065, X93535, AR008382</p> <p>AA176247, AI821555, AI709172, AI349468, AW131940, AW195402</p>
145	HSAXE65	750486	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1012 of SEQ ID NO:145, b is an integer of 15 to 1026, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:145, and where b is greater than or equal to a + 14.</p>	<p>W95894, W92445, H73402, H66648, H79359, F12325, H79249, H73806, H16685, Z42683, AC006238</p>
146	HE8OC67	751119	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a</p>	<p>D87973</p>

147	HKAHA68	752557	<p>is any integer between 1 to 507 of SEQ ID NO:146, b is an integer of 15 to 521, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:146, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 543 of SEQ ID NO:147, b is an integer of 15 to 557, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:147, and where b is greater than or equal to a + 14.</p>	N36402, AA8111768, AA836266, AI133424, AA768296, AA151398, AA774873, Z19310, AA259157
148	HSFAG23	753226	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1009 of SEQ ID NO:148, b is an integer of 15 to 1023, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:148, and where b is greater than or equal to a + 14.</p>	AW001557, AA524870, AI339658, AI339800, AA327382, AA514534, AI269776
149	HDTAT69	754269	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a</p>	AA149864, AI357654, AI961366, AI675183, AI889370, AW273165, AW168146, AA584418, AI589351, AW029558, AI857775, AI263196, AI912444, AI093455, AI038044, AA403237, AA868485, AA132514, AA143774, AI096660,

150	HAICM70	756466	<p>is any integer between 1 to 1242 of SEQ ID NO:149, b is an integer of 15 to 1256, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:149, and where b is greater than or equal to a + 14.</p>	AA863010, AA149809, AA040076, AA970644, AA968515, N63048, AA862236, AI803252, AA403087, N94962, W00553, AI141244, AA463273, AW130916, AI000066, AW368835, AI753426, AI352466, N89760, AA889151, AA902653, AA113446, AA608719, AA775545, AI351760, AI687276, H46733, AA148126, H18181, AA721625, AI913881, AI288428, R55550, AW268567, H18180, R88113, T03911, AA743071, AA747948, AI033757, F11023, W38703, H46809, AA732342, R88211, N84250, AA782748, T65135, AA040124, AA132496, AA215870, AW390553, R55549, AA856772, N56022, AI908968, AA095812, AI972769, T90207, AA974442, AI401403, T35084, R57099, N85991, AI363784, AA113367, AA247898, AI093093, N83375, AW367693, F04840, AA058562, AA366539, AA525407, F23326, T07346, AA089502, AF103800, AF038554, AL035458, AC005288, AC005207, AC006530, AL049781, AL080243, AC002045, AL132987, AC005209, AP000553, AC005730, AC005778, AC002091, AC005480, AC012627, AL034400, AL031587, AC005365 AI816748, AI686234, AA417826, AA877961, AI288883, AA236941, AA133636, AA480326, AA234245, AA479344, AA479453, AA253214, AA861992, AW176548, AF099731, AF052693
151	HMC GF70	756538	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 684 of SEQ ID NO:150, b is an integer of 15 to 698, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:150, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a</p>	AI192349, AI304873, AA888040, AW069185, AA767282, AI129119, AA564457, AA651742, AI151356, AI249136, AA306542, N30853, AI342251,

			<p>nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1696 of SEQ ID NO:151, b is an integer of 15 to 1710, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:151, and where b is greater than or equal to a + 14.</p>	<p>T89687, AI613047, AA709075, AI377566, AI138627, H98207, AI246780, AI671683, AI750946, AA234672, AI141366, AI038245, AI753162, T78075, AI188242, AI281852, AI924239, AA679585, N27245, AA326652, AI042402, AA548672, H13895, AI424563, R73813, AI292129, AI184704, AA340903, AA639212, AI245186, H02760, AA306802, H81790, F35652, T66298, AI619834, R32631, F28456, AA628076, AA262560, H04930, AA737465, AI377568, C00040, H12487, T95135, AW025092, AA808408, H87526, AA386138, T89510, AI139037, H98679, AA709258, AI654151, AA324831, T28285, AA235332, H81789, H08406, T19515, AA373647, F07467, AA261964, T66351, T78241, AA255669, H98206, H63883, AA331170, AA314503, AA360711, AI721028, AI374635, H04825, R32517, H13847, N41380, T10990, AI269779, AA332805, T82939, AI244832, AA348151, H87527, R73814, D57423, AI001167, AA860156, N59842, T95039, N76369, R15527, AI885217, AA309436, H08411, AI657485, L12535, X63039, D16885, AF001863, AF061744, AR018815, AF102850, AJ243486, U39066, U48696, AF045432</p>
152	HE8EX74	756649	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1107 of SEQ ID NO:152, b is an integer of 15 to 1121, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:152, and where b is greater than or equal to a + 14.</p>	<p>AA127738, AA121513, AA311242, AI677703, AW026428, AW008510, AA47425, AI814406, AI580751, AI339055, AA983399, AI401333, AI817112, AW245108, AW105246, AI093883, AI298530, AW029318, AA845373, AW407802, AI865205, AI220597, AI083507, AI313220, AA447426, AW407228, AI912220, AI762367, AA426005, AI573000, AA292519, AI266083, AI476659, AI925381, AI588997, AI244622, AA425818, AA453846, AI250853, AI972597, AI864526, AA991572, AI023072, AI335774, AI435955, AI005456, AI393226, AI268209, AI817407, AI434983, AI242756, AI927250, AI191800, AA453762, AW408630, AA919089,</p>

153	HACBN11	757213	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 431 of SEQ ID NO:153, b is an integer of 15 to 445, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:153, and where b is greater than or equal to a + 14.</p>	<p>AA648891, N71869, AA235475, AI682742, AI344613, AW408696, AA626837, Z44119, AW439273, AI056491, AW407300, AI587634, T35579, AA810563, F22785, AA524075, AA535025, AW131943, AA948308, AI351270, Z40131, AA292040, AA782897, AA731628, R57128, AW376214, D42043</p> <p>H16895, AA216686, T35768, R67203, Z44909, AA446275, AA309747, R19936, W67169, AI653255, AA349758, AI261658, H30782</p>
154	HTTBS70	757508	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 784 of SEQ ID NO:154, b is an integer of 15 to 798, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:154, and where b is greater than or equal to a + 14.</p>	<p>AI809069, AW273347, AI014561, N40036, AA307364, AA806027, N77149, H64996, AI915158, D31319, AW169084, Y09631</p>
155	HCRNF04	757532	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 386 of</p>	<p>AA669476, AA706499</p>

156	HETIS94	757980	<p>SEQ ID NO:155, b is an integer of 15 to 400, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:155, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1743 of SEQ ID NO:156, b is an integer of 15 to 1757, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:156, and where b is greater than or equal to a + 14.</p>	AA156239, AA056107, AI921810, AA058568, AA047227, AI566496, AI922029, AI802334, AI499277, AI095647, AA620591, AA730643, W56228, AA100609, AA284755, AA446999, C06112, W16868, AA505345, AI524754, W56131, N21599, R63249, C16570, AA285342, C16177, AA775048, H01441, R78721, AI453520, AA115890, H86321, AA548384, N28831, AI609530, H02640, AA327779, H02557, R38215, AA147509, D79927, D79922, D79718, H86258, N90610, AA249324, R38216, AA284754, AA829153, AA829132, AA446881, W31882, R45283, AI831590, AA078073, AA078488, AI439494, AA077958, AA078630, AW069159, AA078242, AA078067, AI500233, R91003, W52493, N24046, AW131608, H27065, AA652558, AA078152, AA078270, AA182866, AW439455, AA689483, R76636, AA077991, N72437, AW162664, AA077989, AA078359, AI887465, AA078254, AA297575, AA075792, AL045179, H84628, AW007566, AI133031, AA078230, T95863, H13732, N54855, W80974, AI890136, W80973, AW243749, N62578, AW022205, AA507857, AL039748, N71013, AA515135, AA020886, AI791916, AI032142, AA078271, AA976232, AA827722, AA516129, AA078071, AI866975, AI610170, AW058517, AA327824, AA078172, AI800016, H25229, AA021479, AA489809, AI160446, AA078379, AI349215, H93010, AA078224, AA928045, N80352, AI026869, AA078672, AI214225, H25470, AI796126, AA077784, AW303539, R69671, AA622795, AA078315, H98093, AI913762, N90370, AI889782, AW297499, AA077755, T92043,
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AA078390, T23466, AA496937, AA078288, AA579238,  
 AA351686, AI744921, N66537, H85417, H73636,  
 AA632711, AA078573, AA584142, H23775, N52914,  
 N52345, AA618463, AL043224, AW440309, AI086063,  
 AI751629, H19693, AA078044, AA775851, AA229172,  
 AW207151, F16370, H01805, N35489, AA078053,  
 AL134899, AI758738, W44391, H19889, AA078583,  
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 X15051, X15052, AF001549, AL031230, U54614,  
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 L21175, AC020663, X66282, Z69838, AC010722,  
 AC006020, AL035494, AP000255, AL021877,  
 AC004478, AL133246, X55221, AF054092, AC008498,  
 Z86062, U91728, I31102, AP000213, AC005007,  
 AP000135, AB008861, X55209, U82390, AC006584,  
 Z98885, AP000031, AF105075, AL078630, L21840,  
 AC006944, X61505, U78090, AC005031, X69857,  
 Z47052, AC007510, X07200, M33196, Z73965,  
 AL050305, U91326, M77199, AP000569, Z95115,  
 AC004968, L21178, M87741, AF130248, M80521,  
 AC005372, AF015262, AC005008, AC010077, X89120,  
 X74204, AC010205, AC002365, I31124, AC004949,  
 D63861, AL121595, U48314, AJ229043, AC006374,  
 X77078, AF081913, Z78021, Z96488, AB031201,  
 AL021918, AF029308, M94329, AC004388, L12553,  
 AC004970, U58836, U56716, AP000065, U84721,  
 AC003690, U62019, L01481, AF084001, M87733,



				<p>M94330, AC007425, AL023806, Z95327, AL080243, Z33997, L11996, Z47049, AC002070, AL117694, X52030, AP000497, AC004834, M14088, AF019987, AC002133, M80358, Z69644, AC002412, AP000365, X56936, Z83819, AJ012322, AF177432, AL008727, U73644, AC004804, Z93942, AC004961, AC004615, AC005351, X99801, AL009048, U52388, AC004796, L24174, Z98950, AC008008, AE000664, K02420, M20245, Z80998, AF000573, X77281, AC007402, K02284, AC002544, U35319, U58890, AB025285, L24188, L22381, AC005880, AF187036, AF187073, Y17967, AL022326, AC005740, AC004946, AC004381, AL121766, U08882, X84364, Z13994, AC005939, AC004655, AC006006, AF002994, Z97055, AC005280, AF019412, AL035659, Y17266, AC008125, AC005409, X65062, Z98750, X77298, AJ230904, M87758, L13869, AC005230, X99946, AF022141, U79992, U97228, AF116519, U10048, X75801, U95742, U26920, AF130642, L19889, AF090382, U06764, U60220, U62950, AC005921, Z97206, AC006924, S57980, Z13993, X55225, AC008064, AE000660, AC004768, X99784, Y17265, AC000368, AF019188, AC005291, AC005482, Z98883, AJ230887, AC003109, U44899, X12967, AB031199, AC005697, AC004931, AL008730, Y08012, AC007880, X52617, X79482, AF035925</p>
157	HDPX171	760141	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1231 of SEQ ID NO:157, b is an integer of 15 to 1245, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	<p>AW273095, AI694022, AI718835, AA315035, AA703211, AI027889, AW273104, AA768418, N63102, AA350058, AI825299, AA837259, AA948593, AA580938, AI127983, AI243434, AI246451, AA808353, AA357161, AW088887, W23449, AA469116, AI242332, AA761053, AA552320, AW364736, AA876549, H30358, AI624590</p>

158	HRABS72	761491	<p>NO:157, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 365 of SEQ ID NO:158, b is an integer of 15 to 379, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:158, and where b is greater than or equal to a + 14.</p>	<p>AI299422, AI859061, AW408590, AL035079, Z92844</p>
159	HYAAX74	761724	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 460 of SEQ ID NO:159, b is an integer of 15 to 474, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:159, and where b is greater than or equal to a + 14.</p>	<p>AI458058, AL041704, AW058546, H96554, H28982, AI249470, AI698338, AA253175</p>
160	HSKXC19	762027	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1430 of SEQ ID NO:160, b is an integer of 15 to 1444, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	<p>AI400587, AI243780, W56390, AI806064, AI142808, AW172434, AI652430, AW006585, AI630867, AA429102, AW291113, AI613107, AA034923, H54753, AI688069, AA283157, Z39549, T54735, AA034931, T54649, AI474550, AI031812, H38576, AI221865, H54754, AI342873, AA360836, AW451189, AI933526, AI222207, AA883157, AA759354, AI933671</p>

161	HF6SG75	764179	<p>NO:160, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 435 of SEQ ID NO:161, b is an integer of 15 to 449, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:161, and where b is greater than or equal to a + 14.</p>	236247, AI476229	
162	HCYBG95	766961	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 559 of SEQ ID NO:162, b is an integer of 15 to 573, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:162, and where b is greater than or equal to a + 14.</p>	AI114688, AL120677, AL135677, AA305341, T97204, AA381253, H59001, AA723911, AI688128, H86421, AA054385	
163	HCECT76	767593	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1023 of SEQ ID NO:163, b is an integer of 15 to 1037, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	<p>AL119252, AL079820, AW377614, AW149774, AA292210, AI580133, AI589844, AA434167, AI375091, AW131263, N24363, R89703, AI186918, H97937, AI140697, AI143637, AI700269, W93631, AI459657, AA100744, AA233192, AA233179, AI023927, AA488457, AI014651, H99249, AI796613, AA026639, N45098, N59526, AI091919, AI275089, AI298148, AA993202, AI375312, N45108, AW008656, N40064, AI088232, N90765, N31662, H99117, AA971514, AA903954, AI282391, N63219, AA134118,</p>	

			NO:163, and where b is greater than or equal to a + 14.	AI814037, AA029496, AA782587, R86157, AA044958, AA018780, AA130301, AA293259, W60295, AI092836, AI680859, AI034325, AI052601, AI336056, AI367667, AA844280, AA035694, R99494, AA947498, AI078308, AI346616, N98943, N64178, AA151965, AA017023, AA639546, AA029736, N72298, N53503, AI688275, AA845613, W60386, AA889303, AI090466, AW022319, AI762715, W77806, T75508, AI494541, AI434120, AA055558, AA781417, W72691, AA985396, H83579, AW023710, AW023785, W02894, N70536, AI695640, AA001997, AI040352, T32402, AA485287, AA494385, AA453171, AA772130, T79848, AI150684, T75475, N26374, H44836, AI275440, N66660, T87575, H48836, AI123884, R70703, AA985586, AW131686, AA531279, AI494543, N27129, W19364, AA017221, AA029569, AA974809, AA035387, AA911176, H48567, T85949, R84349, AI090650, T63793, AI214034, H83965, AI735142, AA253117, AA063564, N36546, T51635, R70702, T63818, AL045846, AA760941, H88284, R78772, AW009564, D51782, AI002045, L44354, AA100726, AI040626, AI735071, H59987, H86690, H86373, AA528625, AA485282, AI005567, AW075223, T32706, H44835, R27489, AI474149, T61468, AI581765, T94396, W92382, AA651735, AA628067, T57709, T92894, R28817, N34015, N64179, AI833165, R25644, N24573, W92326, AI394305, R99493, AA775094, T92984, T29926, T07333, T09187, AI919470, H57859, AI475252, AI955023, AI719373, AA026705, T82286, AA878828, W93582, AA253060, AW176699, AA013356, N87705, AI380018, AA768714, AI905107, AI084847, AA453057, T94484, T51793, H98241, AA633236, AA460771, F07631, F07630, L02897, X91849, X91850
164	HEIBB38	768034	Preferably excluded from the present invention are one or more	D63293, AA370775, AA382203, AI632647, AI990894, AA431366, AC004587

165	HHEMK76	769965	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 907 of SEQ ID NO:164, b is an integer of 15 to 921, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:164, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 451 of SEQ ID NO:165, b is an integer of 15 to 465, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:165, and where b is greater than or equal to a + 14.</p>	<p>AA313182, AA847224, AI377129, AA431023, AI630343, AA759180, AI674714, AA626158, AA736979, AA442623, AA306650, AL096751, X98258</p>
166	HE9PB77	771486	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 738 of SEQ ID NO:166, b is an integer of 15 to 752, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:166, and where b is greater than or equal to a + 14.</p>	<p>AI793262, R22645, H16683, AA488818, R21077, W86902, R21078, AA972862, AA481213, R56916, AL050125</p>
167	HTLDW36	772044	<p>Preferably excluded from the present invention are one or more</p>	<p>AL043787, AL044579, AW043685, AW044660, AI916186, AI672781, AL045426, AA974562,</p>

		<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1617 of SEQ ID NO:167, b is an integer of 15 to 1631, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:167, and where b is greater than or equal to a + 14.</p>	<p>AI970385, AI094398, AI911787, AI277712, AA578667, AW302483, AI695123, AL044580, AI243291, AI564263, AI439366, AI690955, AA227758, AA506328, AI023678, R85494, AI538620, AA456280, R67658, AI378414, W52910, AA970895, AA287136, N51530, AI274732, AA454666, AA714569, AA284707, T65516, AW235194, AA766350, AA968588, AA233317, AA680129, F11905, AW196559, T98754, AA783009, AI203179, AW024063, AI682145, AA768922, AA037353, AI365197, AL046185, T98753, T98587, AI624906, AA470641, AI277711, AW303041, T98586, AI312958, AA935144, N53193, T98397, AA455188, AA454847, R67657, AI478123, AI572787, AI564719, AL120853, AI677796, AI633125, AI560099, AI783504, AI283760, AI637584, AI433157, AI702073, AI249877, AI627988, AI358213, AI610690, AI889376, AI921176, AA225339, AI619502, AI284131, AI476478, H45495, AW149311, AI812107, AI922561, AW151136, AI286256, AI978703, AI499131, AI682971, AI873923, AI802542, AW075667, AA835801, AI569945, AI520785, AI439920, AI925196, AW104724, AW075413, AI499285, AI678428, AL119863, AI583308, AI352497, AW104827, AI445025, AW148408, AI824576, AI174394, AW163823, AI804983, AW192652, AI569583, AI954183, AI816010, AI673710, AW129722, AI783997, AW026882, AI469532, AW087455, AI583065, AI590021, AI499393, AI634682, AI669616, AI580190, AI922089, AI921248, AI500061, AI573032, AI922707, AW193530, AW073270, AW169653, AW168031, AI866801, AL037454, AI863321, AI689175, AI866090, AI274728, AI621362, AI824648, AW087207, AI571909, AI670009, AI582558, AI587114, AI801766, AI921464, AW132056, AI934259,</p>
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	AL122093, AJ012755, AL110196, AL133113, AF087943, L31396, AF162270, AL110225, AF026816, L31397, AL137463, AF104032, AL080060, AF113019, E03348, AL137478, A77033, A77035, AL049430, AL133640, AL117583, L30117, AR059958, AL133075, A45787, U80742, AL050138, AL110280, X72889, AR038854, AF106862, AF113690, AF113677, E04233, AR000496, AL137560, U39656, Z72491, AL137521, S78214, AF113691, U96683, I09499, AF146568, X93495, AF079765, AL080124, U00763, AB019565, X82434, A65341, E05822, A03736, AJ238278, AL117457, AF125948, AL137556, AL133093, X87582, E07108, AL133072, AL137480, I26207, AL122110, AF003737, L19437, AF067728, U67958, AL110221, Z82022, AF111849, AL133067, AL049452, AL122050, E02349, AL137648, AL137538, AF113013, A07647, AF113676, AF185576, AL137294, AL133606, AJ006417, AF061573, AL122111, AF078844, AL122049, AF118064, I09360, AL049283, AF118070, AF111851, AL122098, AF017152, AL080127, AL096744, U68387, AL133077, S68736, AL133014, AL137527, U72620, AR011880, E08263, E08264, E07361, A93016, AF097996, Y11254, AL049314, U58996, AF026124, AL133568, AF090896, U42766, X70685, AL133098, AL049466, AF017437, AL049938, A18788, AL050172, AF079763, E15569, Y09972, AL049464, AL137533, E02221, X63574, AF057300, AF008439, AF057299, AR038969, AF119337, I42402, AJ242859, AF153205, AL117585, AL133104, AL137526, AL049300, AF090943, Y07905, E08631, AF125949, AL050146, X98834, AL122123, AL133081, E06743, AL080074, U49908, AF210052, AL122118, AL117416, Z37987, I00734, A90832, M30514, AL110197, AF061795, AF151685, AL023657, E00617, E00717, E00778, U78525, I41145, U88966, AF132676, AF061836, U91329, AF067790, T98396		



168	HMWHN4 3	772357	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 726 of SEQ ID NO:168, b is an integer of 15 to 740, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:168, and where b is greater than or equal to a + 14.</p>	<p>AI738508, AW269645, AW085307, AI031571, AA313301, N88286, AA807165, AA983918, AA552086</p>
169	HUSIR49	772876	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2024 of SEQ ID NO:169, b is an integer of 15 to 2038, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:169, and where b is greater than or equal to a + 14.</p>	<p>AI884614, AW340047, AW005124, AI684508, AI160377, AA443134, AA024474, AA729971, AI813730, AI167595, AA729837, AA128713, H48052, AA742644, AW403406, AA293164, AW269665, W55869, AA305630, AA334276, AA293280, W48571, AW204727, AA128594, AW380176, AI889219, AA357001, AI274940, W56297, AA465411, H48053, H70779, AA854038, AA736647, AA024475, AA465342, AI633699, AA694263, AI078372, AW401877, AA226003, AA587901, AA226055, AW172815, AA158771, H70778</p>
170	HE9HY44	774019	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 508 of SEQ ID NO:170, b is an integer of 15 to 522, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:170, and where b is greater than or equal to a + 14.</p>	<p>AA313266, AA778721, AW163161, AA315935, AW403205, AA312059, AA125949, AA373169, H06542, FI3274, N31289, T77300, AA135017, W38328, AA056157, AA405935, AI905071, AA759329, AW392317, AA047840, AI148049, T78059, W04596, AA143149, AA053980, T18978, AA233629, N31083, N56489, AI024387, AA079574, AI905101, AA018173, AR044461, AF061739</p>

171	HTTEL19	774244	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1652 of SEQ ID NO:171, b is an integer of 15 to 1666, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:171, and where b is greater than or equal to a + 14.</p>	AA769605, AA725629, AI573233, AI207712, AI926564, AI741825, AA769307, AI743757, N50042, AI040827, N26613, N39026, AA478121, AA037476, AI190688, AI125851, AW014584, AA460383, N35458, AI361075, AI040255, AW273759, AI797498, AI274933, AA287174, AI473963, AI610608, W79421, AW148514, AA011183, AI434631, AA588744, AW189046, AA815047, AI671119, AA532558, AI707655, N39701, AI581854, AI651892, N24667, AI199704, AI291795, AI268953, AW243737, AA811982, AI807309, AW271638, AA290731, H43355, AI433382, AI143017, AI580052, AW362474, AW362475, AI537177, AI292173, AI784622, D20098, H18539, W22366, AA522656, AA137084, W79321, AI278409, AW371914, AW371838, AI472897, H18431, AA460321, AA136975, R60129, AA036895, AA363951, AA641342, AW371942, AW438812, AA720630, AW383572, T94791, R48168, AI940703, AW405065, AA873593, AA290732, AA010754, T15824, Z41193, AA478120, AA307484, AI675917, AI203080, AA092129, AA037558, R31227, AA385115, T94040, AI917319, N54700, AA879178, AA209206, AW371898, AA352849, R48169, AI784195, AA343582, AI801731, AI369549, R31189, F01683, AA353583, N84404, H01883, AI986085, AA311601, C14389, D80212, D80045, D81030, D59927, AI249478, D80391, D59787, D80196, D59619, D80210, D80240, D80022, D80219, D80166, D59859, D59502, D81026, C15076, C14331, D80268, D80195, D58283, D80164, D59467, D51423, D51799, D59275, D80253, D80043, D80227, D80193, D80248, D50995, D80133, D51022, D80269, D80366, AA305409, D80188, D80522, C14014, AA305578, D80038, D57483, D50979, D59889, AA514186, AA514188, AW360811, AW366296, D80157, AW177440, D80439, D80251, AW178893, T03269, AW377671, AW375405, D80302, AI699906, D80247,
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172	HMCFS02	774516	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 424 of SEQ ID NO:172, b is an integer of 15 to 438, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:172, and where b is greater than or equal to a + 14.</p>	<p>AW360817, AW179328, AW375406, AW378534, AW179332, AW377672, AW179023, AW178905, AW177731, AW178906, AW378532, AW179020, AW377676, AW352171, AW352170, AW178907, D80132, AW178762, AW178908, AW179019, AW179024, C06015, AW177733, AW378528, AJ243666, A84916, A62300, A62298, AB028859, AJ132110, AR018138, AR008278, AF058696, A67220, A82595, X67155, AR060385, Y17188, D26022, Y12724, A25909, AB002449, D89785, A78862, D34614, A94995, AR008443, I50126, I50132, I50128, I50133, D88547, I14842, X82626, AR066488, AR016514, AR060138, A45456, A26615, AR052274, AR054175, Y17187, A43192, A43190, AR038669, AR025207, Y09669, AR066487, A30438, A63261, AR008277, AR008281, I18367, AR062872, A70867, D50010, AR016691, AR016690, U46128, AB012117, AR008408, D13509, I79511, X64588, A64136, A68321, A85396, D88507, AR066482, X68127, A44171, A85477, I19525, A86792, AR060133, X93549</p> <p>AA465115, C06235, T10782</p>
173	HDTBY31	775355	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by</p>	<p>AW069166, W73247, AW338990, AI743646, AI798679, W72937, AA195131, AI826715, AL040676, AI858109, AW339097, AI858524, AI925532, AI720571, AI240302, AW365135, AW365134, AI751527,</p>

<p>the general formula of a-b, where a is any integer between 1 to 2497 of SEQ ID NO:173, b is an integer of 15 to 2511, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:173, and where b is greater than or equal to a + 14.</p>	<p>AI814748, AW070577, AW182753, AA989355, AW069756, AI754287, AI422979, AI624140, AW069022, AA525181, AW361759, AW069454, AI753947, AI679733, AW069069, AI888821, AI801298, AI626043, AI982806, AW068366, AA600048, AI521569, AI801015, AI471993, AI971816, AI753124, AL048166, AA873789, AI081401, AI087361, AI311467, AA121145, AI077712, AI355594, AI356670, AI300881, AW191963, AI281324, AA873156, AI004219, AI421675, W90778, AI635123, AI159941, AI022368, AA062957, AI950026, AI814880, AA478018, AI753138, AI189685, AI445222, AI223234, AA534826, W45394, AA121476, N66424, AW239275, W46960, AI925026, N37087, AI952591, AI306636, W46993, AA569557, AW139833, AW117889, AA026215, AA076063, AA888963, AW069613, N73740, AA558975, AI453725, AL047816, AW068210, AI753921, AI073645, AA342989, AA579170, AI935835, AI445293, AA972051, AI475993, AA524984, AA043908, AA808425, AI251813, AI090202, N71242, AI280828, AI368782, R70995, AA527960, AA622122, AI633208, AA525036, N94555, AI446651, N25769, W46881, N22201, AA553369, AI752460, AA573642, AA291477, N99903, AW440535, AW068044, AI926777, AA669921, AA703064, N21537, AA044414, AI751996, AA579540, AA664451, H82382, AA478174, H95047, AW023948, N67873, AI251465, N30442, AA807935, AA370271, W46961, AI865615, N95439, AA758273, AA447737, H09543, AA318217, F07712, AI752632, H08973, AI273006, H85516, AA937506, AI287781, H97881, C16555, H89615, AI085180, AI127972, AW067908, R36359, AA564048, AW079187, R99241, AA864676, C16400, H20896, AW192979, AI707501, AI589944, D79947, N42334, AA661674, H16712, AA665817, AA318304, H85367, N66864, AA234043,</p>
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174	HUSXPIS	775367	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 216 of SEQ ID NO:174, b is an integer of 15 to 230, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:174, and where b is greater than or equal to a + 14.</p>	AA295620, AA731072, R63433, H96450, AA453669, T28113, AA344709, AA318444, AA375983, H16713, AA652809, R73973, AI910289, C16089, AW029046, AI370492, AA897183, C16471, AA437143, AA318438, AW028413, AA318448, N20953, AA363555, R78964, H20846, C16487, D58348, AI524662, R63380, C15861, AI537935, AA852352, AA384678, AA506512, AA853189, AI868152, C16255, F13661, AA932002, AA770090, AI524674, AA234044, C16306, AI619654, R24137, AA384738, N29477, R24081, AA318523, AI572513, R21522, AA295997, AW189997, AA426421, AI806799, AW008486, AW385583, AI075624, N42354, AA384736, H84715, T68396, AW238584, C16202, AA318213, AA318309, M64110, AJ223812, M83216, L37147, L37206, AR001262, AR001263, D90453, D90452, E05381, U18419, AR001257, AR001258, AR001259, AR001260, AR001261, AR001256, AR066494, A85203, AL133053, AL133074, AL133049, T49285, T61774, T68350, T94414, T69842, T81078, R01216, R05674, R21626, R23745, R23797, R24753, R32662, R45484, R45484, R70942, H82276, AA026678, AA042828
				N95475, AI955115, AI219597, AI125960, AI679011, AI535864, AI754065, AI087078, AI150409, AI744052, AL048450, AA502147, AI601262, AW262502, AA912928, AW028363, AA602232, AA603513, AW169428, AW169674, AA983193, AA214412, AI685774, AI675871, AI381677, AI264508, AW148508, AI919344, AI264494, AI879859, R54833, W74586, AI720265, AA911955, AA470880, AI129963, AI370278, H75791, AA628270, AI683731, AA176239, AA564183, AI685785, N27116, R63181, N22930, AI809737, AI192813, AA351561, R74566, AA640918, AI864745, AA302826, AA182813, AI218201, N66895, AA055653, AA495790, Z41516, AI015929, W76422, AA479099, AI304656, AI028724,

AA968673, AI269332, AA426243, AI742469, AW172355, AI417578, AI926491, R35211, AI924505, AI829669, R48268, R32004, AI080308, AW148777, R70797, AW070245, R64127, AW007358, AI608627, AA533226, H02296, AA700183, AA808550, H25713, D58771, R09133, AW021554, H88508, AA878590, AI954194, AW205672, R49874, H88963, AI659199, AA758287, H21941, R82275, AW023338, AI491842, AI521012, AI335208, AI569583, AW080766, AW026882, AI433157, AI702073, AI359586, AI633125, AI815232, AW193236, R36271, AL036980, AI961589, AI969655, AI863382, AI538885, AL045500, AI525669, AI648454, AW079409, AL079963, AI267162, AA470491, AL047100, AI468872, AW169671, AI612885, AI269636, AI590830, AI640729, AI802542, AI812107, AI677796, AI619502, AI950729, AI590630, AI620284, AI611738, AI954183, AA505148, AI862144, AI538829, AW161579, AI120853, AW051258, AI567993, AI801793, AI312428, AI874261, AI340603, AW080327, AA761557, AL043293, AI697137, AA420722, AW132056, AI284517, AI537677, AI564719, AI249946, AI926790, AL135517, AI866751, AL036403, AL135022, AI890833, AI873604, AL120676, AI344935, AI554343, AW081036, AI590043, AL048656, AW088903, AI862139, AI559296, AL119791, AI612913, AI280637, AI334445, AI637584, N99088, AI539771, AL037454, AI699865, AW302965, AI358701, AW104724, AI364788, AI269205, AI609375, AI648509, AI524671, AI890907, AI349598, AI445611, AI934259, AI345180, AI610402, AI536638, AW268083, AI254731, AW150453, AW104827, AI445025, AW198090, AI679174, AW269098, AI568855, AW020693, AW163823, AW268251, AI432969,				
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AI923989, AA806720, AI871697, AI590227,  
AI284084, AI537187, AI690813, AI536685,  
AI538259, AI889376, AI625079, AI500659,  
AW148363, AW073865, AI440239, AI635461,  
AI445432, AI566670, AW151136, AW268768,  
AI801325, AI500523, AI635942, AI207454,  
AI687728, AL1119863, AI567128, AI872423,  
AI349645, AI500706, AF100931, I89947, AL137459,  
E12747, AL133113, AJ000937, Z82206, A08916,  
AF153205, I48978, AC004383, AF113699, AL117460,  
AL133080, AL137557, AL133560, AF090934,  
AL137550, AL035458, AL050116, AF158248,  
AL137656, AL122093, AF106862, Z37987, AL137537,  
A08913, AF113677, L04504, Y10655, AL117649,  
AF118094, AL050309, AF113019, AF177401, AI2297,  
AL035407, AC004837, AR029490, AC006501, I89931,  
AF030513, AF113690, I33392, AL050172, I49625,  
AR011880, A08912, AL122110, A08910, A77033,  
A77035, E02349, AF090903, AF146568, I48979,  
X82434, A08909, D16301, AL096744, X65873,  
U42766, AL122123, AC006112, AC006288, Y16645,  
AL117583, AF159615, AR038854, U00763, AL049430,  
AL137558, AF097996, AL133081, AF090896,  
AF061795, AF151685, AL137488, AF090901,  
AL117435, AL133606, AL137548, S78214, A58524,  
A58523, AF091084, AF113691, AF104032, Z99495,  
S36676, AF106827, AL049452, AL122100, AL117457,  
A08908, Y07905, AL133112, S76508, AF126247,  
A65341, AL122050, AL133640, AL137271, Z82022,  
AF183393, AL133075, AL050149, AF125949, I66342,  
A03736, AJ012755, I68732, AF146191, AL080124,  
AL080074, AF028823, AF017437, Y11254, AL137478,  
AL110196, AL110221, AL137523, AL137533, E07361,  
AF078844, AC007172, AF118070, AC009233,  
AB007812, A93350, AL117394, AF113694, AF090943,  
AF215669, E06743, AF090900, A07647, U78525,

175	HSAWS31	775791	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1177 of SEQ ID NO:175, b is an integer of 15 to 1191, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:175, and where b is greater than or equal to a + 14.</p>	<p>X63574, AF182215, A18777, X70685, AL133016, AL133665, AL050155, AR034821, U35846, D83032, I89934, AL137283, AR000496, L40363, AL137530, U39656, I03321, AR059958, X84990, M27260, AL023657, AL050146, AL110225, S68736, AF139986, AL137480, AF115410, AL050024, AF111851, AL117585, E07108, AL080140, AL137294, AJ005690, AF008439, AL050277, A08907, Y10936, AL049466, AF017152, AL050108, AL096720, AF102578, AL122121, AL137479, AF113013</p> <p>AA974462, W06885, AI554054, AI684706, AI925476, AI139276, AA780720, AA421817, AI625251, AA280928, H13578, AI570340, W27519, AW440430, R28365, H13212, AI926915, R28571, AA345215, AI758440, AI358593, AA205773, AA360987</p>
176	HE8OV83	777319	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1485 of SEQ ID NO:176, b is an integer of 15 to 1499, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:176, and where b is greater than or equal to a + 14.</p>	<p>AI870660, AA808901, AI972389, AI560392, AA648525, AA410623, AI887956, C17747, AI803966, AI073418, AI002965, AI567718, AI628683, AI458763, AI690239, AA935641, AA854436, AA767208, AA233576, AA564455, R64020, AA884861, AI446057, AI049625, AA247796, AA761155, AA971459, AA831116, AA505194, Z25000, AA235683, AA831355, AW023246, AA322476, R63929, AA653539, AA249729, AA747661, AA912822, AA314637, U78045</p>
177	HL3AD81	778434	<p>Preferably excluded from the present invention are one or more</p>	<p>AI935726, AI936909, AI862304, N94360, F24963, F34120, AI928571, H14292, AW451717, AI652961,</p>



178	HHERQ03	778583	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1524 of SEQ ID NO:177, b is an integer of 15 to 1538, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:177, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 882 of SEQ ID NO:178, b is an integer of 15 to 896, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:178, and where b is greater than or equal to a + 14.</p>	<p>F32857, AW295265, F35709, AI651009, F33806, AI989576, H55067, R87210, Y10487, U66243, X79483, I15074, AL022328, Y13439</p> <p>AI904506, AI240194, AA576870, AA815311, AW295198, AW444473, AA968435, AW449497, AW341239, AW262665, AI796246, AI968266, AC005280</p>
179	HTXFI40	779480	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 554 of SEQ ID NO:179, b is an integer of 15 to 568, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:179, and where b is greater than or equal to a + 14.</p>	AI285867
180	HBIMB82	779588	<p>Preferably excluded from the present invention are one or more</p>	<p>AI207716, AI122603, AI147230, AW043960, AI769142, N49598, AA516171, AI889520, AA670030,</p>

		<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 414 of SEQ ID NO:180, b is an integer of 15 to 428, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:180, and where b is greater than or equal to a + 14.</p>	<p>AI935133, AA487916, AI160077, AI143592, AI139135, T40460, AA984874, AI745497, T69719, AA101410, AI110691, AW150375, AA810208, AA219042, AW073349, AI880736, AA244041, AI137994, AI560839, AA453533, H80924, AL038637, T52554, R40201, AA332099, W23732, AA331913, AC007283, AC004025, AC004106, AL035427, AC003065, AC005033, AC006543, AC005015, AC006544, AC007207, AC007690, AC005081, AC004918, AL121757, AC003081, AC002456, AC007090, AP000013, Z80361, AF001549, AP000156, Z84814, AL031294, AJ006995, AC004928, AL121748, AC002453, AP000154, Z83826, AF015262, AC011504, AJ229043, AC003085, AC009248, AE000659, AC008040, AC005740, AP000014, AL023655, AC005908, AL121718, AJ006996, Z95326, Z83819, AF113169, AC006582, AC004076, AC002367, AC011604, AC004852, AC006350, AC011592, AL021706, AL022239, AC006210, AF003625, AC006355, AC005279, AB020863, AC005962, AC004925, AC002452, AC007773, AC007364, AL122126, AL031224, AF067844, AL021329, AF023461, AC008273, AC007486, AL009172, AC005859, AF035396, AC004910, AL023876, AC004883, AC005042, AC004605, AC002288, AF172277, AL021069, AC005150, AC007567, AC007436, AC004522, AC005266, AL049591, AC003086, Z83820, Z84488, AC003666, AC006379, AC008127, AC002519, AF152365, AC005881, AF001550, AC005234, AC005022, AC003046, AL023755, AC007023, AC004240, AL031000, AC005723, AC000403, AC000056, AC007056, AC006516, AL035555, AC018633, AP000161, AP000019, AC004699, AC006313, AF042091, AL031430, AC006559, AL034377, AF002997, AL109847, AC005873, AC009411, Z98753, AC006101,</p>
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181	H1TEW79	781085	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2887 of SEQ ID NO:181, b is an integer of 15 to 2901, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:181, and where b is greater than or equal to a + 14.</p>	<p>AC005906, AL022727, AF152363, AJ239322, AL035687  AL134724, AL134723, AA143026, AA193300,  AW152356, W60898, AA143059, AA150499, AI084072,  AW054888, AI935155, AW007543, AI986179,  AL135538, AA284068, W61050, AI857721, AW009766,  AI830145, AA150977, AW190129, AA833823, N40688,  AI377038, AW449002, AW088353, AI829982,  AA847169, AW379371, AA428918, AI218694,  AA468807, AI129353, AI184525, AI379211, H97572,  N27928, AI934898, AI307200, AA136954, AI128809,  AA352003, AA143177, AA431873, AA450156,  AA136861, H97614, W72306, AA156703, AI750062,  AA706407, W76362, AA554767, H70845, T03747,  AA450096, AA194243, AI654580, AI278743,  AI039607, H14973, AI061299, AW451121, AW176706,  AA733104, AW452446, AI031667, AI359421,  AW150939, AI869544, AI200267, AI471924,  AW008863, AI222650, R38628, AW198108, T65062,  H79969, AA365623, AA431872, AA887775, T65100,  AW079115, AA721306, AA367476, AI803848,  AI282703, F12010, AW403361, AI246010, AI289994,  AA470395, AA737617, AA284124, T80508, AI245744,  AA465596, F10546, T34885, AW057997, F12947,  H00830, AA336566, N67194, F09656, T75183,  AA358794, Z38698, H79970, AA344657, C04809,  AA809420, D55047, AA371887, N49243, AA317124,  AA379985, AI003470, AA331865, T08539, AA769725,  R38850, AA357508, AI375333, AA100013, AW374451,  T16848, AA337355, AA112980, AW374492, AA295202,  C20735, T16847, N67216, N87904, AA588223,  AA873643, AA889852, AA829832, N71226, AI557264,  N71729, AI541393, AF055029, A84916  AW291264, AA836143, AI805923, AW074136,  AI436039, AW131096, AI376780, AI219649,  AA718961, AI342604, AI740540, AW088161, H00467,  H01112, C05897, AI016011, AW044539, AI273481,</p>
182	HLJB183	781286	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by</p>	

183	HSAWU83	781366	<p>the general formula of a-b, where a is any integer between 1 to 276 of SEQ ID NO:182, b is an integer of 15 to 290, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:182, and where b is greater than or equal to a + 14.</p>	<p>C05667, F00411, F27321, H13518, AL119457, AL119399, AL119324, AL042544, AL119443, AW392670, AL119484, AL134902, AL119464, AL119418, AL119355, AL119439, AW372827, AL119319, AL119363, U46349, AL119483, Z99396, AW384394, U46341, AL119444, AW363220, AL119497, U46351, AL119391, U46350, U46347, AL119341, AL043029, AL134538, AL119522, AL119396, U46346, AL119335, AL042542, AL037205, AL119401, AL043033, AL119496, AL134531, AL042984, AL042965, AL134525, AL134536, U46345, AL042614, AI142132, AL043019, AL043011, AL042450, AL042975, AL043003, AL042551, AB026436, AR060234, AR056494, AR054110, A81671, AR069079, AA191695, AI650501, N95399, W85901, AA180481, AI494399, AA985645, R51322, AA255524, AA085271, AA553546, Z39640, AA406127, AA405228, T73014, F01472, AL031668</p>
184	HADFW62	781376	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 627 of SEQ ID NO:183, b is an integer of 15 to 641, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:183, and where b is greater than or equal to a + 14.</p>	<p>AA192481, AW304932, R50904, AI475447, AL046510, R17624</p>

185	HSNAK79	781832	<p>NO:184, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 721 of SEQ ID NO:185, b is an integer of 15 to 735, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:185, and where b is greater than or equal to a + 14.</p>	<p>AI818497, AI002556, AI373738, AA058589, AI587277, H89124, AI369073, R59724, Z40583, T17339, AA112636, AA746250, AA885276, AI357396, N58617, AF146191</p>
186	HSUBX87	782276	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 771 of SEQ ID NO:186, b is an integer of 15 to 785, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:186, and where b is greater than or equal to a + 14.</p>	<p>AI863484, AW130380, AI658693, AI569266, N24376, AI651336, H96205, AW197748, AA431932, AA033944, AA443720, R06046, AI632470, H96741, H99128, AA085003, AA677132, H99280, R05942, AI015460, AA033943, T25869, AW374046, AI183539, AB032969</p>
187	HATEF13	782358	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1665 of SEQ ID NO:187, b is an integer of 15 to 1679, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	<p>AI809005, AL135712, AA961822, AI936383, AW241448, AW296283, AW241505, N80207, AW195211, AI807109, AW299231, AA459127, AW241601, AI203172, AA458908, AI801133, H67242, W38497, AL135711, AI522215, AI671270, AW440083</p>

188	HEBFR23	783413	<p>NO:187, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 766 of SEQ ID NO:188, b is an integer of 15 to 780, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:188, and where b is greater than or equal to a + 14.</p>	<p>AI033685, AI918037, AI870713, AW194348, AI080484, AI022736, AI871158, AI660990, AI332851, AW248627, N32804, AA757635, AA453750, AW249066, AI369806, AI278347, AA514626, AI277968, AA453832, AA865377, AI832170, AA603746, AI417380, AI961506, AI016836, AI078744, AA808330, AI093505, AA580357, W19958, AA603747, AI206003, W19186, AA834351, AA743531, AI832453, H58751, AI832659, N91367, AI352516, AW450338, H93684, AI128559, AA863382, AA531595, H93683, AA879282, AA662244, AI333368, AI695482, AA378035, F24646, AI186570, AA904957, AA364107, AI873412, W38771, W25317, N42248, AA249564, AW370236, AI718817, AA094564, N93167, AA594808, AI143536, T82155, U95006, U95007</p> <p>AW139061, AI343267, X52140</p>
189	HAKMPI2	783668	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 519 of SEQ ID NO:189, b is an integer of 15 to 533, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:189, and where b is greater than or equal to a + 14.</p>	
190	HIMBT13	783677	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 588 of SEQ ID NO:190, b is an integer of</p>	<p>AI817861, AI985492, AA489125, C06279, W47216, AA992488, AI001022, AA489029, AA370533, AI077469, T10549, T18546, AI951758, AA625215, AW439612, AI539397, AI040171, AI634967, AA532362, AI741864, AA909571, AA855006, AL048534, AI090919</p>

191	HEAAK74	785087	<p>15 to 602, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:190, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 844 of SEQ ID NO:191, b is an integer of 15 to 858, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:191, and where b is greater than or equal to a + 14.</p>	<p>AW294092, AI971219, AA131239, AA031734, AI125943, AW130883, AI478335, AA663946, AA769749, AI253107, AA782027, AI633949, AI953738, D62865, AA742672, H01201, AI270256, R40247, D62925, D79833, AA037415, D79915, AA663274, F00427, AA437054, AI925303, AL134524, AL045328, AA564698, AL038838, AL037343, AL037436, AL038983, AL037335, AI142134, AL037323, AL044125, AL040193, AL044162, AL037443, AL041347, AL043538, AL037727, AL043496, AL038532, AL040621, AL038822, AL037435, AL047012, AL041324, AL038761, AL043941, AL042898, AL041238, AL044186, AL040617, AL040463, AL043923, AL043814, AL047170, AL040464, AL044037, AL043845, AL041296, AL047219, AL047183, AL041635, AL040625, AL040294, AL045684, AL040576, AL044064, AL041086, AL041098, AL041459, AL041752, AL041577, AL045753, AL042135, AL040510, AL043467, AL043677, AL040839, AL046850, AL043492, AL041602, AL040052, AL040768, AL040444, AL044074, AL041246, AL046994, AL041730, AL041523, AL043627, AL046914, AL041374, AL040472, AL043848, AL043570, AL041955, AL041133, AL046442, AL041233, AL040322, AL134110, AL041096, AL041163, AL037295, AL045671, AL040119, AL039316, AL047163, AL038745, AL040075, AL046392, AL047057, AL044272, AL039643, AL044258, AL041168, AL041159, AL042096, AL041358, AL045920, AL045327, AL040148,</p>
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	AL049018, AL041346, AL041292, AL040458, AL044187, AL040149, AL041142, AL045990, AL040332, AL040571, AL041197, AL040529, AL044199, AL037341, AL047036, AL046330, AL039338, AL079878, AL040745, AL040370, AL040128, AL044274, AL040553, AL040342, AL041277, AL041186, AL039744, AL045817, AL040414, AL040155, AL040285, AL040091, AL044165, AL041131, AL039432, AL040090, AI547295, AL041051, AL040168, AL043444, AL043775, AL040253, AL041227, AL045857, AL040082, AL044201, AL040329, AL046327, AL038878, D29033, AL041278, AL038651, AL040263, AL040255, AL041140, AL048677, AL045725, T18597, AL040238, AL079852, AL045989, AL039915, U46344, AL043612, AL047037, AL044529, AL041210, AI318479, AL135012, AA585453, AA585439, AI541205, AL049069, AL039360, AI557731, AL041344, AI525556, AL045494, AL042523, AI557808, AI557262, AI541510, AI557602, AL042420, R29218, R28895, AA283326, AL037279, T10982, AL038024, AL045891, AL042519, AI525500, R28892, AL045326, AA585329, AL048714, AI557238, AL048657, AI535813, AA174170, R28965, AL042655, R45895, AL042741, D59436, R28735, R29445, AL047340, AI557082, R29177, AA585476, T11028, AI541509, AA585101, T23957, T23985, AC007543, AR066494, AJ238010, AR064707, A93923, D17247, A93931, A93916, A58524, A58523, AJ244007, A93016, AL133053, AL122101, A85203, I62368, A22738, AF082186, A86792, AL133074, E13740, AL133049, AL133082, I03331, I08389, Z32836, AR051957, I05558, I66495, I66494, I60241, I60242, I66498, I66497, I66496, I66486, I66487, I15718, I15717, A20699, E00696, E00697, E03813, I66482, AR009151, I66485, I66483, I66484,



192	HAMGI86	785328	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 653 of</p>	<p>AR038066, AR027099, AR063812, M28262, AC005913, A06631, AF149828, D50010, AR031566, A85395, A70872, A85476, D13509, AB025273, E03627, I48927, AJ244003, AJ244004, AJ244005, A35536, A35537, A90655, A02135, A04663, A02136, A04664, Y16359, D13316, I44681, I84553, X81969, I84554, E17098, I00682, S60422, I01995, X83865, I19525, A11245, A02712, A02710, E12615, AR035193, A92133, A84772, A98767, E14304, A77094, A77095, A11623, E00609, A11624, A07700, A13392, A13393, AR031488, I13521, A20702, A84776, A81878, A84773, A84775, I52048, A93963, A93964, A27396, AR062872, I63120, AR062871, AR017907, A84774, AR043601, I25027, A95117, A43189, A95051, A18053, I06859, AR027100, I49890, AR062873, I44531, A11178, E01007, I28266, A43188, AR067731, A20700, A18050, AR037157, AR054109, A23334, A75888, I70384, A60212, A60209, A60210, A64973, AR067732, A60111, A60211, A23633, I21869, AR007512, I26929, I13349, A25909, I44515, A10361, I26928, A98420, A98423, I26930, I26927, A98432, A98436, A58522, A91965, A98417, A98427, A24783, I44516, A24782, A70040, A91750, E16678, A82653, I08051, E16636, D78345, AJ230935, AR038855, Y14219, I08396, AR051651, AR051652, I08395, AJ230972, AR022273, I03669, I03668, AJ231028, I18895, AJ230902, AJ231009, AJ230845, I05845, AR023813, A22734, AJ230951, AJ230867, AR051865, AL133076, AL133068, AR008429, I36244, AR051864, AJ230996, AW294706, N23047, N28711, N23224, AA039977, AA287636, AA286793, AW136370, AI362850, AA382819, AW409954, AA312796, AI565859, AA312800, AA382325, AI240475, AA229436, AA324312, U35117, U75488, A67520, U18422, S79780, L40386, AL080206, A67526</p>
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193	HDPCN86	785465	SEQ ID NO:192, b is an integer of 15 to 667, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:192, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 523 of SEQ ID NO:193, b is an integer of 15 to 537, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:193, and where b is greater than or equal to a + 14.	N86828, AI913557, U47924
194	HMCQH90	788626	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 386 of SEQ ID NO:194, b is an integer of 15 to 400, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:194, and where b is greater than or equal to a + 14.	W28621, Z45756, R17112, AI221755, AA095670, AB028639, AJ012475, AB028640
195	HHBFM33	788838	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 417 of	AI439141, AI476247, AW090328, AW292568, AW292569, AI985420, AW362223, AA401849, AA305047, AA598733, AA993611, AA730336, H91898

196	HSLFI09	789286	SEQ ID NO:195, b is an integer of 15 to 431, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:195, and where b is greater than or equal to a + 14.	AA295472, U45880	
197	HFIAX76	789419	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 403 of SEQ ID NO:196, b is an integer of 15 to 417, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:196, and where b is greater than or equal to a + 14.	AI493872, AA731632, AA631190, N95410, AA969060, N51634, AA928925, AA992162, AA417039, AI383145, D19652, AA417160, AI291891, AA342340, T18573, AI986226, AI620852, AA427729, AI431965, AI620893, AI289909, AI221751, R49694, AI423215, AI969461, AA331421, AA831856, AA027116, AW148890, AI954148, AA827764, AI150339, R41827, AW136010, AA910582, W45218, AI016353, AA159932, AA569372, AI361956, AI682845, AI355883, AI423360, AA192384, T62635, AA729714	
198	HLICN93	789631	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 592 of	AL047346, AI480171, AI089981, AI744455, AI951617, AI589882, AA582852, AI963822, AI890922, AA554358, AI972192, AA564368, AA677069, AI191449, AI346608, AI872387, AA558411, AI685531, AI445001, AI680107, AA114170, AI303902, AW054975, N68490, AI469072,	

			SEQ ID NO:198, b is an integer of 15 to 606, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:198, and where b is greater than or equal to a + 14.	AA875829, AI222753, AI185020, AA555056, C75212, AA528668, AI279358, AA610229, AI340311, AI565029, AI978702, AI570924, AI653642, AA995096, AI564449, AI683219, AI126926, AI674857, AW173472, AA916403, AI921157, AW058292, AA612629, AA577418, AA100365, N74536, AI813877, AA227442, AI535922, AI886028, AI309963, AI040135, AW103709, AA738137, AA158698, W86276, AA588332, N70214, AI933812, W28115, AW074396, AA887444, AI992376, AI499448, D58003, AW130467, AA613484, AA864851, AI377397, D45479, AI868742, T27693, AI368094, AI962925, F17756, AW245386, AA203313, AW150314, AI475230, AI567070, AI707666, AI016710, AW087851, AA522626, N94544, AI858284, AA558953, AA554219, AA490991, AI269808, AI872522, AL042382, AW182873, N44202, AW148542, AW172891, W68405, N72978, AA065232, AA714661, W44811, W84874, AW152281, AW075838, AA617785, AW193039, N91334, D58218, AA133106, AA059060, R36527, AI926020, AA468561, AA745949, T86824, AA865589, AI566637, AI828353, AI570885, AA099415, AA299841, AA099409, AW189618, AI270206, AI678404, W84873, AI583091, W26919, AA988554, AI160653, N31791, AI908603, W25912, AA126074, AA367650, AA026484, AI368100, AA772689, AI133166, AW023629, L28010, AB022209, D16869
199	HCFBE51	789872	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 359 of SEQ ID NO:199, b is an integer of 15 to 373, where both a and b correspond to the positions of	AA283156

200	HFEAU63	790190	nucleotide residues shown in SEQ ID NO:199, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 3638 of SEQ ID NO:200, b is an integer of 15 to 3652, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:200, and where b is greater than or equal to a + 14.	Y10260, AJ000097, AJ000098, U61110, Y10263
201	HAFBC92	790547	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 537 of SEQ ID NO:201, b is an integer of 15 to 551, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:201, and where b is greater than or equal to a + 14.	AW137677, AW274817, AW203971, AA293668, AW140143, AW184019, AI970870, AI017173, AI018332, AI805270, AI369454, AI277010, AW134617, AI091828, AI819704, AA535795, AI299005, AI992316, AW027943, AA477763, AI589653, AA746502, AI479965, AI802000, AA526926, AI436232, AW207230, AA428226, AI630822, AI670914, AW149488, AA745853, AW135764, AI277002, AA398529, AA831623, AA291745, AI825634, AW137882, AI186872, AI247557, AA706959, AA836598, H97046, AI972605, AW139897, AA281084, N95248, AI301258, AA293000, AI423842, AW237546, AW195354, AW207800, AA044180, AI468330, AW138405, AW393486, AI559377, AI333133, AF007887, AI468159, AA447010, AI221290, AA304437, AA724268, AA429429, AI492167, AI217837, AA737067, AI306689, AW137327, AA044365, AI468865, AA961190, AL039390, AA715307, AI364788, F26535, AL045500, AA809974, AI440263, AI866465, AI371228, AI872423, AI538764, AI859991,

	AW022102, AI805769, AI620284, AI433157, AI554821, AW151136, AI539771, AI537677, AI494201, AI269862, AI538342, AI500659, AI815232, AI801325, AI500523, AI445990, AW193134, AI582932, AI923989, AI284517, AI500706, AI445237, AI491776, AW151138, AI521560, AI889189, AI500662, AW172723, AI284509, AI889168, AI866573, AI633493, AI434256, AI888661, AI284513, AI888118, AI436429, AI889147, AI440252, AL047422, AI689420, AI866786, AI860003, AI610557, AI433037, AI887499, AL046463, AI354998, AW269097, AW022682, AW105601, AI890907, AA641818, AI336495, AI950664, AW162194, AI254226, AI309443, AL039086, AI699011, AW083804, AA761557, AW059828, AW191003, AL036980, AI923046, AI371251, AL048375, AL036638, AI251830, AI345347, AI344817, AI538850, AI909696, AA748353, AW088903, AW151714, AW167918, AW129230, AI670009, AL119791, AA572758, AL048656, AI343037, AW082113, AW075084, AI866608, AI874166, AI349598, AI288285, AI890806, AW087445, AI589267, AI365256, AW129916, AI923509, AI866510, AW238730, AW079736, AI499986, AI611728, AI648567, AI371265, AI343091, AI866469, AW071349, AA493647, AI307736, AL043981, AI174394, AL121270, AI335426, AI348777, AI439443, AL040241, AI349256, AL039276, AI312152, AI064830, AI567582, AI273179, AW268072, AI434242, AW168946, AL110402, AA508692, AI349937, AW073697, AA613907, AW074869, AI307543, AI334884, AW169604, AW071412, AW117882, AI624543, AI282355, AI307708, AL045163, AI336513, AL041150, AI312325, AL036631, AI242736,

AL042745, AI340659, AI690748, AI348895, AI499285, AL042628, AI340604, AI310575, AI335363, AI340627, AI334930, AI340519, AI307520, AI355779, AI805688, AI285419, AI340533, AL036904, D78255, AC007041, AF113013, I33392, AL122049, A08916, I89947, I48978, A08913, E03348, A08910, A08909, U58996, AL049300, X93495, AL133072, A58524, A58523, I89931, I49625, AR038854, AF119337, AF114818, AF113690, AL117583, M86826, AF026816, AF113689, L19437, AL110221, AF016271, A03736, AL122110, A65341, AL133080, AF051325, AR059958, AL133077, AF057300, AF057299, A08912, E07361, AF079763, AL133568, AL117457, I66342, AR011880, AJ242859, AF183393, A07647, AL117394, AF118064, AL050024, AF118070, AL049466, AF113699, X70685, U00763, AL049452, AL117435, A93350, Y09972, AL137294, X98834, AF017437, AL133093, AL049283, AR000496, U39656, AL049314, A08908, AF106657, AF003737, AI8777, AL117460, E08631, AL137273, AL050092, AL133606, AF061943, AF078844, AF090934, AF111851, AF113676, AF113677, AF175903, I26207, AF090943, AL133098, AL110225, U80742, X63574, X72889, AF113019, AL137557, Y11254, I48979, AL137271, AL133081, I03321, Z82022, AL050116, AL122045, AF125948, X65873, U91329, AJ012755, AF081195, AL080124, AL080060, AL137429, AL137526, AR038969, X72387, AL133640, L30117, AL117585, AF026124, U87620, AJ003118, AL050108, AF090896, AL133113, U35846, S78214, AF113691, AL122123, I89934, AL137283, Y16645, Y11587, AL122050, Z72491, AL110197, AL137648, AF162270, AL080234, AL133016, AF158248, AL050146, AL122093, AL133031, AL110280, S77771, A93016, AF091084, AL080074, AF118094, AF097996, AL137459, AJ238278, X92070, AL080127, U96683,				
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202	HE9SD26	791155	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 651 of SEQ ID NO:202, b is an integer of 15 to 665, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:202, and where b is greater than or equal to a + 14.</p>	<p>AF090903, AL137550, AL050393, E15569, U42766, AF061573, X96540, U49908, AL133560, AL049464, AF100931, I96214, AR034830, AL110196, AL049430, LI3297, A90832, U68233, I92592, E07108, U68387, AI2297, Y07905, AL050138, AF079765, X53587, I00734, S61953, AF113694, AL050277, AL137556, X82434, AL133645, AL137560, AL049382, M30514, U66274, AF125949, L31396, E00617, E00717, E00778, AL133014, AF146568, AL137521, L31397, AF008439, AF104032, AL137463, AB019565, AL133104, AL133637, AF126247, I09360, AF067728, AL137478, AJ000937, A77033, A77035, AF087943, E02349, I42402, AF153205, AL137538, AF111849, AF090900, AL096744, AL137533, AF177401, AF185576, AR054984, AF090901, AL133565, E02221, AL137480, AL137292, AF106862, M92439, AL137476, U88966, E08263, E08264, S76508, X81464, AL133067, E04233, AF132676, AF118090, AF061836, AL122111, AL117440, AJ006417, X87582, I46765, X84990, AL133557</p>
203	HFIZG43	791220	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by</p>	<p>AI766169, AI632576, AI625866, AI949137, AI376933, AA599093, AI812013, W60205, AA428120, AI376850, N22352, N92196, AA633596, AA724103, AA729302, AA804535, N64468, N71844, AI598109,</p>



204	HDPUX67	791749	<p>the general formula of a-b, where a is any integer between 1 to 2088 of SEQ ID NO:203, b is an integer of 15 to 2102, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:203, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 269 of SEQ ID NO:204, b is an integer of 15 to 283, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:204, and where b is greater than or equal to a + 14.</p>	<p>AA098879, R61261, AI636307, AA428121, W25102, N93244, N59455, AW387240, AA464513, W60206, AA129820, AI352082, AA742332, AA129819, AA723850, AI955390, AW001648, AW196374, AA293868, AI334838, AA102067, R50977, AA354966, N29492, H99149, N20078, N27969, AA548064, AI424253, AI610440, N67250, AA888624, AW196016, R86941, AA398292, AA125924</p> <p>AI382215</p>
205	HVAAA93	792034	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 411 of SEQ ID NO:205, b is an integer of 15 to 425, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:205, and where b is greater than or equal to a + 14.</p>	<p>T97660, AI673260, AI056242, R37764, AI912461, R61552, AI076354, AA452577, AI039530, AA608628, AI075913, AA496666, AA557347, AI469551, F10309, AI990064, AA846119, H56124, AI652652, AW189840, AI498569, AI582012, R45257, AI686983, AL042944, AL046466, AI927233, AA715307, AA809974, AL037640, AI590043, AI887163, AW051088, AA761557, AI621341, AI698391, AA748353, AI364788, AA916133, AW169784, AI866465, AA425228, AI434255, AW162194, AI799674, AI581033, AI560873, AI064830, AI355277, AI624293, AI889189, AI797538, AI345688, AA641818, AW161156, AI434969, AI540674, AI285439, AA279795, AI473150, AI479577, AI274507, AI888208, AI475371, AI432644, AI354998, AL121270, AI800473, AI434731,</p>

AI289791, AI628015, AW084056, AI691088, AW080746, AI798456, AI800159, AL045413, AI583032, AI371243, AI582966, AI699823, AL045500, AI610446, AI690620, AI241901, AI434741, AW020425, AI866503, AA464646, AW089275, AI366922, AI537677, AL120254, AI433157, AI702073, AI273189, AI273179, AA502794, AL039716, AI095003, AW148354, AI499890, AW088560, AI274495, AW161202, AI633125, AI567953, AL121365, AL046944, AL043152, AI538564, AI915291, AW152182, AI281757, AW151283, AL118781, AI114703, AI932949, AI473536, AW044029, AI561356, AW022584, AI538055, AI884318, AI565172, AI638644, AI801793, AI269862, AA580663, AL047675, AI648567, AI524654, AI690946, AI554821, AI249389, AI612750, AI683173, AI401697, AW151136, AI866469, AI539771, AI245008, AI446046, AI270295, AI471282, AI582932, AI923509, AI500061, AI494201, AI440238, AL042515, AI866770, AI866581, AI500659, AW131999, W74529, AW152550, AA862606, AL040011, AI589428, AI815232, AI801325, AI282346, AI500523, AW087445, AI500714, AI538850, AL121328, AI887775, AI612913, AI872423, AI923989, AI284517, AI623941, AI500706, AI570056, AI452560, AI491776, AI445237, AI274811, AW151138, AI524179, AI521560, AW075382, AI287449, AI500662, AI890907, AW172723, AI284509, AI539800, AI582912, AI802695, AI538885, AI889168, AI440263, AA648402, AI866573, AI633493, AL036638, AI434256, AL036673, AI805769, AI434242, AL045349, AI251221, AI553645, AI888661, AI284513, AI702065, AI888118, AI866090, AI859991, AI436429, AI355779,				
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AL047422, AI866786, AI500514, AI860003,  
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AW020397, AI890507, AI471429, AW023351,  
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AA579618, AI539781, AW167083, AW129722,  
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AL137533, A65341, AR038854, S36676, AL117457,  
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AF111849, AL137529, A08916, Y16645, AF065135,  
S68736, AL133072, AL137292, AJ005690, Z97214,  
E06743, AF158248, A08910, AL049339, A77033,  
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AF004162, AL080139, Y09972, AL023657, AL133665,  
AC004200, AB016226, X82434, X66871, AJ000937,  
A18777, I89931, AR034821, AL137479, A58524,  
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AF126488, AF180525, AL110218, Y11587, AF069506,  
Z13966, AL117416, S77771, I89934, A65340,  
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L04504, X72889, E12747, AL080118, A15345,  
AL122110, AL133080, X80340, AL117626, AL133081,  
AF047716, AL110158, I09499, AL096744, AL137550,  
AL133077, D16301, AL050092, AL050170, AF113677,  
A08907, AR000496, AL133640, U39656, AF141289,  
AF176651, AL122100, AL137558, AF102578, I68732,  
I00734, AL133560, AF113694, AL136884, AL049996,

				<p>AF017437, A83556, U58996, E00617, E00717, E00778, AL096720, AF090901, U35846, AL137480, AF106862, AJ012755, AL117648, AL050277, AF082526, AL049283, U95114, AL049430, X63162, AL080110, X72387, AL122098, AL080140, AF162270, X66417, AF175903, AL080074, AR029490, AF094480, AF117657, AL137665, AL110280, AR011880, X63410, A08911, AF090934, S63521, AL080159, AL117587, Y10936, Z82022, AF200464, AF017152, AL137711, AF090903, A58545, AF061981, AF185576, U78525, AL122093, AL080148, Y07905, AF032666, AF008439, AL133112, AF081195, D83032, E07361, AF111112, I89944, AF028823, AL050278, AF183393, AF205861, AJ003118, AF030513, AL122121, M92439, A21103, AR013797, X66862, E05822, AL049314, AF115392, L30117, AF031147, AF079763, AL080162, Y14314, AL122045, AL133568, AF146568, AL137488, AL050393, AL117435, AL137641, AB008792, AL110222, AB008791, U88966, AF002985, AF100781, Y10823, AF210052, X52128, AF153205, U86379, AL133016, AF125948, AL117440, AL137547, AF106657, A12297, E01614, E13364, A03736, AF057300, AF057299, AC008014, AL137476, AL137657, AL049938, E02349, AJ238278</p> <p>AL119375, AL119472, AA056147, AI903199, AA476853, AA381656, Z22148, AR035811, AB004066, AR035828</p>
206	HAMFQ15	792557	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 469 of SEQ ID NO:206, b is an integer of 15 to 483, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:206, and where b is greater than or equal to a + 14.</p>	

207	HADCW71	792624	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 962 of SEQ ID NO:207, b is an integer of 15 to 976, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:207, and where b is greater than or equal to a + 14.</p>	<p>AL046980, AI270202, AW303936, AL044220, AA016290, D60018, H38828, R85735, T55567, AA305433, AI635396, AI886195, AA355716, AI673338, T55646, AA939176, AI652370, AA614253, AA170839, AI367235, AI858608, AI493321, AA167778, X85133, AR048215</p>
208	HCHMB04	793437	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 646 of SEQ ID NO:208, b is an integer of 15 to 660, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:208, and where b is greater than or equal to a + 14.</p>	<p>AA429231, AW249217, AA115832, AA315785, Z42191, AA534535, T08490, AI952945, AA336855, R35842, AI656317</p>
209	HLQAX49	795184	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 500 of SEQ ID NO:209, b is an integer of 15 to 514, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:209, and where b is greater than or equal to a + 14.</p>	<p>AA242944, AA923126, N41959, AI582562, AL135257, AI269406, N72044, AW241758, N34003, AW027441, AW015898, AA229606, AI335831, AA156768, AA133285, AA807798</p>

210	HMAJP26	795744	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 159 of SEQ ID NO:210, b is an integer of 15 to 173, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:210, and where b is greater than or equal to a + 14.</p>	AI952367, AA197003, AA074137, AA565088, AA654675, AI626122, AI064920, AA523250, AA523501, AI985025, AA565778, AI371227, AA553751, AI039890, AA781040, AA878796, AI037193, AA602771, AI803821, AA742486, AI557234, AI129087, AI536063, AA601423, AI654020, AI969468, AI472401, AA991485, AA058305, AA807408, AA533029, AA854497, AA574195, AI281580, AI951405, AI270628, AI863838, AI521000, AI636135, AI698986, AA284626, AA602750, AA578770, AI886113, AI699232, AA516221, AI286320, AA192946, AI635447, AI860015, AA502690, AA541607, AA593931, AA983244, AI679202, AA086056, AI002276, AA583094, AA069405, AA580156, AA577587, AA133652, AI216986, AI207550, AA190269, AA888621, AI355488, AI446558, AI581106, AI476024, AI866928, AA826995, AI270513, AA575936, AI673543, AA192700, AA576109, AA156110, AA781261, AA827450, AA178912, AI281569, AA554018, AA642989, AA804880, AA876479, AA112977, AA483044, AA970568, AI537350, AI862726, AI537070, AA862087, AA238229, AA238675, AI472518, AI832650, AA640141, AA665191, AI439260, AA864406, AA121138, AI954469, AA469303, AI570297, AI183721, AA194294, AI521036, AA644700, AI446723, AI672710, AI961292, AI799675, AA528100, AA829541, AI133326, AI683500, AA150001, AI564363, AI453492, AI521105, AA526003, AI521003, AI446679, AI525612, AA149995, AA088997, AI625480, AA189368, AI525835, AI805347, AA575882, AI832660, AA829550, AI038783, AI888702, AI859687, AA073984, AA118343, AA531484, AA128966, AI914794, AA978220, AA494282,
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				AA961805, AA177134, AI439068, AA157012, AA211716, AI680523, AI708075, AI299907, AW029101, AW081141, AI635597, AI628841, AI859301, AA192743, AA654056, AI925459, AA179406, AI564222, AI445670, AI301463, AI819457, AW190308, AW072645, AI698489, AI281418, AI832662, AI887279, AI688877, AI949078, AI557278, AI683406, AA489846, AI567683, AW439015, AA081059, AW148498, AL036584, AI691046, AI538341, AI735056, AA937273, AA134093, AI475156, AI572055, AA467743, AI857239, AA534247, AI689510, AI475226, AA610657, AI066782, AA128377, AW263901, AA662051, AI222627, AI805501, AA467859, AI720138, AL047719, AI570266, AI955704, AI864117, AA583943, AI801302, AI499505, AA888674, AI869123, AA541421, AI572976, AA134919, AI282783, AA635318, AW008289, AW148304, AI500441, AW276757, AA844636, AW193943, AA502736, AI800867, AA844419, AI932453, AI932973, AW440125, AI539086, AA652263, AW167785, AW192398, AI887530, AA467784, AI471514, AA642884, AW440114, AW008319, AI811181, AI689613, AI570248, AI357743, AW129283, AI888059, AW073693, AI620672, AA469167, AI433478, AW073236, AA888299, X55654, AF004339, M25171, X62996, V00662, J01415, X93334, X15759, D38112, AF134583, AF035429, U12690, U12691, U12693, I27366, U12694, D38113, X93335, U12706, M58009, U12705, U12697, U12704, M25424, X73306, Z63649, Z57093, Z57092, Z63650
211	HBI/EA52	796023	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by	AA366194, AA714291, AA235463, AA292527, AI272057, AW055059, H60300, H53305, AW366197, R89790, AI086873, AA564262, W46331, AW263155, W46330, AI280157, AA909523, AA026927, AA595542,

		<p>the general formula of a-b, where a is any integer between 1 to 1507 of SEQ ID NO:211, b is an integer of 15 to 1521, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:211, and where b is greater than or equal to a + 14.</p>	AA026926, AW275606, AI159905, AI499570, AI648699, AW082532, AI282652, AW118508, AI801807, AW020381, AW055252, AW050725, AI865942, AI860885, AI564716, R20540, AA838230, AA761557, AI688848, AI299903, AI538885, AA826958, AA807677, AW130362, AA729782, AI799244, AI471909, AW194014, AI634223, AW151974, AW080652, AI608711, AI886355, AW162189, AI627714, AW130309, AI702019, AW411235, AI784214, AI285439, AI611728, AW020419, AW075921, AI690663, AW118382, AI334893, AI628284, AL134840, AI567625, AI538085, AI560806, AI493740, AI860027, AA760655, AW410696, AI421662, AI364135, AW103628, AW131952, AW090768, AW020095, AI586931, AI690813, AI471517, AI553926, AI925680, AW193524, AA746607, AA853213, AA420722, AW118448, AI699020, AW409813, AL042193, AA127565, AI570384, AW411351, AI364639, AI758272, AW090093, AI357830, AI445131, AW148303, AW020455, AW411043, AI583578, AW023846, AI678357, AA100772, AW411265, AA420758, AI688894, AW410902, AI571699, AW265004, AI312428, AL036652, AW089405, AI923989, AW148639, AI926593, AI633307, AI453339, AW129456, AI250646, AI889256, AI933992, AL040011, AW238688, AI683492, AI241741, AW166937, AW410959, F27438, AI859644, AI880111, AI567971, AI421085, AL035847, AI859840, AW151132, AW151456, AA954134, AI951076, AI472487, AI241678, AW130804, AW023884, AW090238, AI307446, AW151475, W33163, AW131994, AI680467, AI344819, AI241884, AW071380, AW020693, AI610671, AI478723, AA853539, AW411363, AI476086, AW089275, AI687614, AA969375, AW059828,
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AW088521, AI802542, AA427700, AI422855,  
AI610426, AI097410, AI097084, AI283322,  
AI582483, AI537187, AI348995, AI419650,  
AC006101, EI2579, S69510, Y18678, AC009501,  
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AF047716, M64936, AL133619, AL117432, U02475,  
AR053103, A26498, X99971, U57352, Y14634,  
AF081197, AF081195, X66417, I29004, A18777,  
I66342, X57961, AF185614, AL122045, AR068466,  
EI2747, AF054289, Y11254, S68736, AF137367,  
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AF044221, AF124728, AL110228, AL133085, X72889,  
AR038854, AC005156, AL137298, U42766, X99226,  
AF161413, AR068751, AF118064, A08913, Z37987,  
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A76335, I92592, A91160, AL133075, U72621,  
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AC005374, AF013214, AF017437, AL137283,  
AR005195, J00983, X61399, AF089818, AF132676,  
AL049423, S73498, AF061836, U37359, X54971,  
AL137658, AF004162, A08916, AF030513, AL080074,  
AL049276, AF081571, AF111112, U96074, A92311,  
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AL049465, AL133069, AF097996, E04233, AF141289,  
E01812, U31501, I48978, U72620, X06146, L49056,  
AL137478, AF000167, AB026995, AL050172, S59519,  
AL050116, AL080147, Y07915, AF085809, AP000218,

212	HPSNE17	796181	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1861 of SEQ ID NO:212, b is an integer of 15 to 1875, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:212, and where b is greater than or equal to a + 14.</p>	<p>AF167995, AL080124, X63410, AF078844, X61049  AI907194, AI907195, AL120707, AI907022,  AW188115, AW268965, AI697605, AI798864, N51959,  AI679129, AA579823, AI127108, AA883477,  AW029511, AW007075, AA099718, N94550, AI015649,  AW009557, AA972225, AI695125, AI569231,  AI907189, AW118927, AA099719, C21110, AA968453,  AW204283, AW204279, AW374477, N79637, AI870931,  AI991955, AI217002, AW071937, W46669, AI800485,  AI567512, W22777, AI267966, AA609463, AA904028,  H97972, AW085512, N40284, AA733160, AI360759,  AA017136, AW150268, AW402048, N24663, W20464,  H51545, AA872277, AI073733, AA844339, W02812,  R19607, AW022058, AI216280, T32938, N42294,  AA026800, AI074742, Z22007, AI679703, T36078,  AA730171, AI198370, H25794, H81979, AA385040,  W46476, AA768932, N73318, AW374971, AW374185,  R97863, AI475104, AI982821, R97813, W30842,  T27056, W05020, H59174, AI630651, AA706863,  AI962117, AA724291, R08142, AA758766, AA724527,  AA760653, N31762, W02379, AA470875, AI418803,  N55648, AA357701, AW374495, N58012, AW118690,  D53178, W32716, AW264453, AW051015, AA019807,  AL043211, N53797, AI783974, N35454, AA040237,  R94398, AI092624, AI572522, AI540464, N64213,  AA091925, AI907192, AI907021, AI203084,  AC006454, U28727, A84916  AW297953, AI636734, AA279919, AA102737,  AI732911, AI572680, AA904211, AA846923,  AI889579, AI797998, AA602906, AI271762, H54252,  R70883, AI744830, H53284, AA633424, AI280266,  T40388, AA995373, AI049845, AI925869, AA115863,  AA347969, AA622801, AI271985, AL047349,  AA368155, AI190247, AA425924, AI190648,  AA568314, AA610433, AW023111, AI627168, F17700,  AI690750, AA302971, AA315361, AI912401, R93919,</p>
213	HTECB93	797079	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1903 of SEQ ID NO:213, b is an integer of 15 to 1917, where both a and b correspond to the positions of</p>	

			nucleotide residues shown in SEQ ID NO:213, and where b is greater than or equal to a + 14.	AA122307, AA635150, AW419389, H53546, AI049630, AI479068, AI281622, AA410788, AA486277, AI354333, AW089950, AA228778, AA827904, AA721998, AA173342, H85808, AL119028, AA825954, AI311779, AI808930, AI054339, N54538, AI342786, AI300413, T41134, T61476, R06030, AA584765, AW068020, AI858889, H51835, R83402, AI749306, AI340151, AI271766, H49253, AA877992, T93109, F35674, AA481970, AA021429, AI742168, AI539009, AI434686, AC006050, AC005060, AC004962, AL049856, Z82244, AC005486, AL022393, AF064858, AL034549, AC005972, AL121658, AC004985, AC006482, AC009044, AC007073, AL008629, Z99291, AL049767, AL078581, AJ243213, U78027, AC007363, U85195, AF002223, AC006236, AC010200, AC005539, AL035422, AL136168, AL031728, AL031671, Z99758, AL049712, AF030453, AP000014, Z99716, AL122023, AF196779, AC005088, Z97054, AC007637, AC002369, AL117330, AL021155, AL033527, Z82201, AC007541, AL096791, AC007436, AC004921, AC002385, AP000569, AL109627, AL049779, AC006006, AL049643, AE000658, AC005777, AC005245, AL135744, AC003110, AC003692, AC005695, Z98750, AC006314, AC006360, AF069074, AC006441, AL133163, AP000359, AL049776, AC006515, AC006511, AL030995, AL049875, AC007371, AC004019, AP000516, AC002477, AC007376, Z68277, U91319, AC007052, AC005158, AF196971, AC008064, AJ010598, AC006270, AL035417, AC007676, AC005763, AL023876, AP000065, AC004522, AP000212, AP000134, U47924, AC008372, AC002416, Z98036, AL022578, AC005822, AC003687, AP000506, AF217403, AC004150, AL032821, AC002527, AL031673, Z98742, AC005043, AL035460, AP000131, AP000209, AL050318, AL009050, AC006582, AC005344, AC004849, AL034402, AC004263,
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				<p>AF070718, AC004041, AC006057, AC003013, AC004814, AB000882, AC005670, AC008124, AC003109, AL023804, AC005520, AC006544, AJ246003, AC009501, AC003101, AC000353, AC004662, AC003982, AC004984, AF045555, AF017104, D86992, U80017, AC004605, AL009181, AC016831, AC005399, AC006254, AL109952, AC003029, I34294, AL008725, Z83844, AC002295, AC005971, AC006505, AP000049, AC010170, D88270, AC004752, AC005015, AC008126, AL117258, AL132774, AL035659, AC006210, AC006121, U82828, AP000317, AC002400, AP000119, AP000051, AP000166, AL034417, AP000558, Z69920, AP000311, AC005255, Z92546, AL117354, AC005823, AC004998, AC005901, AC005011, AL117338, AL096763, AL031681, U68061, AC006312, AC004491, AC005484, AC003093, AC006211, AP000692, AC005514, AC008012, AL050308, AL008718, U07561, AC007066, AL031228, AP000514, AC005081, AC007687, AL035413, AC005412, AC004895, Z83826, AC005212, AC002349, AC006139, AP000116, AP000152, AC005913, AL031594, Z83840, AL031782, AC002496, AF111168, AL049611, AC009516, AC007450, AL050333, AF109907, AC006120, AL049733, AL035588, AL121754, AL078463, AC005969, AC005146, AC006960, AP000356, AC004242, AC002996, AL096775, Y07848</p>
214	HCYBF25	797477	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1530 of SEQ ID NO:214, b is an integer of 15 to 1544, where both a and b correspond to the positions of</p>	<p>H71711, AA305066, AI334443, AI284640, AA490183, AL138455, AL046409, AW303196, AW301350, AI270117, AA521399, AL037683, AA521323, AL041690, AW072923, AA491284, AW274349, AI133164, AI305766, AI613280, AA908687, AI431303, AW274346, AL046205, AL044940, AA720702, AW193265, H72277, AI110770, AI963720, AI732865, AA244357, AA581903, AW265385, AI076616, AA623002, AI281881, AL045053,</p>

nucleotide residues shown in SEQ ID NO:214, and where b is greater than or equal to a + 14.	AL042853, AW265393, AW419262, AL138265, AI064864, AI696962, AW410400, AL119691, AA503473, AA483223, AI754658, AI350211, AA522942, AI679782, AA577906, AA526787, AA126035, AL046457, AI345654, AT345518, AA551503, AA533333, AI754955, AI969436, AW327868, AW407578, AI801482, AA468022, F36273, AW073470, AA679124, AA492166, AI355206, AA501809, AA167659, AL042753, AA572713, AI457397, AA682912, AL048626, AL121235, AI370074, AW270382, AI368745, AA503475, AW276827, AA601355, AW004911, AL039958, AI341548, AA665330, AA446657, AI471481, AW245747, AA610491, AA531372, AI254615, AI305547, AA525824, AA649642, AA665021, AI570261, AI207401, AA491814, AA101689, AA649705, AI345157, AW276435, AA493708, AW167372, AL038705, AW088846, AA613227, AA631507, AW408717, AI061313, AA533725, AA984708, AW270270, AW438643, H71429, AI610159, AA164251, AI744826, AI370094, AW376931, AA653618, AI708009, AA584167, AA178953, AL042420, AA806796, AI567076, W79504, AA576336, AA630925, AA613345, AL038474, AW062724, AI821271, AI799642, AI249997, AI289067, AW088616, AI951863, AL120343, AW083402, AA192740, AI375710, AA599920, AI149478, AA709005, AI805363, AA491831, AI341664, AA610493, AI814735, AI357901, AA970213, AI537506, AL048925, AI633025, AI368256, AA469451, AI246119, AI358571, AA810370, AI688846, AI053672, AA832181, AA828042, AI499503, AL038785, AW338086, AA828704, AA482711, AA716348, AW088202, AI687343, AI619997, AW193432, AA126051, AL119649, AA582911, F09736, AA507824, AL120687, AW406162,
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	AA837084, AI434695, AW406447, AA837677, AA652057, AW302013, AA973803, AI061334, AW029038, D83989, AF227510, AC004690, AC004989, X54175, AC006344, AC004987, AC002430, AC007384, AC002385, Z98051, AF015149, AL022163, X54181, AC008079, AC006213, AC007011, AC007298, AC006960, D84394, AC005412, AC008101, AJ010770, AL034384, X55926, AC016831, AC002565, AF017104, AL121934, AC007032, AC005839, AC002429, U57009, AL122021, AC005291, AC006195, AL121603, AC006511, U18394, U66059, AL135783, AC004940, AF123462, AC005154, AC005968, AL023882, U67233, L78833, AC005242, AC004019, AC000159, AF015156, AP000459, AC007227, AC011311, AC005768, AC007285, AC005091, AC004638, U18391, AC004534, AL096770, AC005250, AC004010, AC004033, AB020859, AL031053, AC005019, AC004890, AL031983, AC002549, AL031295, AL008728, AF015147, AC007541, AL050097, AC004069, AC004859, AJ003147, Z86061, AC000035, AL031054, Z94277, AC000066, AL096776, AC006251, X54178, AC007043, AC004626, AL023575, AL031257, AC007514, Z70042, AC002470, AC005962, AL022722, AC006130, U62317, AC006006, AC006998, AC002041, AC006336, AC004990, U95740, AP000311, AL035608, AL050308, U18395, X55923, AC002377, AL049709, AC004263, AL009029, AL121653, AC006045, Z75741, AC007877, AC005914, AL031777, AC004502, AC007731, U69730, AC016025, AC005500, AL021453, AC006277, AL031281, AC002538, AL049544, AC003977, AC000353, AL132799, AC004946, AL034452, AF200465, AC018769, AC007899, AF020503, AL022315, AC006057, AC002289, AP000555, AC004953, AC002347, AL049830, AP000037, AP000105, AC005815, AC004650, AC005699, AL035659, Z82976, AC004066, AL023284,

215	HGAMA30	797486		<p>AF001549, AC008064, AL050331, AP000193, AC005501, AL121655, Z99495, AC007774, AL096867, AC020663, AF015151, Z69705, AC005922, AC007243, AC003003, AC004453, AC005005, AJ010598, AC005180, AC004754, AC016830, AC008372, AL024507, X60459, AC006989, AC005257, S43650, AC006005, AC006203, AF010238, AC004821, AC004963, AF029308, AL133500, X88791, AC004743, AC008125, AP000552, AC004913, AC004210, AC004861, AL096701, AF196779, Z83821, AC004213, AC009479, AP000112, AL136297, AP000297, AL096861, AC003007, AL121915, AC005562, AL034351, AC004675, AC007845, Z99716, AL133245, AC007666, AP000501, AC006512, AC009227, X54180, AF165142, AC007488, AL049562, AF088219, AC005102, AL078477, AF147275, AC005859, AP000117, Z69666, AC007510, AC004848, AL078463, AC005274, AL133399, AP000962, AC006044, AC006210, AC005821, AB020858, AC004537, AC002996, AC004814, AC007392, U91323, Z82210, AF091512, AC005261, AF057280, AC004381, AC005969, AC006016</p>
				<p>AA583424, AI721245, AI732444, AI718759, AI832388, AI732445, AI720621, AI720903, AI460276, AA130541, AI990978, AA554005, AI990957, AI685117, AI733759, AI879881, AI983398, AI832502, AI733760, AA134397, AA574028, AA130579, AA134398, AA126912, AA115664, AA580320, AI748949, AA308497, AA134372, AA134332, AA055636, AA436898, AA133748, AI708072, AA132736, AA130459, AA132846, AA603658, AW362172, AA297640, AA316534, AI302569, AA102277, AA130403, AI983618, AW204007, AA296956, AW362167, AA506416, AI380363, AI445264, AA134371, AI688106, AA100297, AA569104, AI963380,</p>

216	HRACH60	797747	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 239 of SEQ ID NO:216, b is an integer of 15 to 253, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:216, and where b is greater than or equal to a + 14.</p>	AA132909, AI925567, AA298528, AA100290, AI832499, AA297149, AI707468, AA134333, AI380043, AA633163, AA297152, AA127117, AA487992, AI672950, AA298415, AA574073, AA053238, AA297184, AA130530, AA099805, AI720152, AI962005, AI832629, AA130458, AW365047, AA132779, AW029266, AW058268, AA132843, AI581967, AI582108, AA298926, AW130348, AA584890, AA134251, AW376682, AA132714, AA297180, AA134207, AW028870, AA298241, AI880716, AA297183, AI469819, AA298344, AA296954, AA297182, AW376616, AI880399, AW268068, AW362573, AA487881, AA054072, AA877810, AI749293, AA877743, AI459944, AW374543, D25577, C21047, AW196745, AA054456, AW391718, AW391727, AB006781, AF014838, I95750, U82953, X79303, AF091738 AW080690, AA614563, AI269560, AI285459, AW083685, AA502721, AW082425, AA485648, AI673446, AI439933, AI355090, AW264867, AI287492, AA505570, AA622721, AA487439, AI862183, AI823692, AW083660, AW272581, AI925844, AW050611, AI885939, N71611, AI275991, AA487423, AI281711, AW084234, AI572719, AI569431, AI174617, AI475375, AI355253, AA622247, AI499240, AI680502, AI571159, AA961417, AA715707, AA961736, AI922443, AI540667, AI985069, AI500485, AW265071, AW150614, AI683645, AI365081, AI634623, AI082402, AA610544, AI082261, AI619489, AI499600, AI865267, AI358143, AW193357, AI660947, AA894944, AW404817, AW440445, AW071078, AA612581, AI783548, AA479003, AI434485, AI619732, AI863933, AI919107, AI660631, AA961804, AA736641, AA974179, AI633036, AW192221, AW131018, AI351174,
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AW084033, AA595651, AL048475, AA865720,  
AA973862, AI861993, AI872500, AI499106,  
AA937868, AI890071, AW080462, AI885942,  
AA618094, AI828336, AW188890, AA594007,  
AI890708, AI300883, AI624510, AW236413,  
AI001847, AI540090, AI285393, AA502715,  
AI288281, AI669056, AW172900, AI360460,  
AI264745, AA807383, AI627376, AW403082,  
AI583175, AA760969, AI289965, AW243791,  
AI872885, AI341798, AI935893, AI081272,  
AI935276, AI829836, AI872290, AI146651,  
AI864869, AI687899, AI802638, AW078658,  
AI814074, AI634576, AI073938, AI339485,  
AI861992, AI809753, AI559987, AW337628,  
AA593866, AI269851, AW082739, AW130089,  
AW380153, AW151760, AW103040, AI281812,  
AI147519, AI365016, AI870122, AI627447,  
AI569175, AI673170, AA443552, AA715361,  
AW084440, AI888139, AI922625, AI831674,  
AI285717, AW337680, AA622906, AA426211,  
AI619966, AA593951, AI339475, AA610548,  
AI146644, AA505632, AI913901, AA632405,  
AI813565, AW404344, AI925203, AI635092,  
AA610542, AW080728, AA977129, AI344439,  
AW188450, AI432677, AI682188, N92647, AI081169,  
AI914809, AA548191, AA410606, AI973272,  
AI863941, AA746587, N59240, AI434237, AI927549,  
AW440616, AI351782, AI445326, AI924221,  
AI224379, AI627201, AI818052, AW192022,  
AA729661, AI299068, AA742774, AI491756,  
AI991224, AA991714, AA630366, AA523112,  
AA643739, AI491798, AA643958, AA807484,  
AW317005, AA724274, AI590049, AI446726,  
AA640103, AA622937, AA421253, AI285977,  
AI591368, AI001206, AI282706, AW316994,  
AW026951, AI682767, AI885552, AA385988,

AI310075, AI360557, AI738828, AI673464, AI540590, AI925498, AI811405, AI886449, AI304769, AW085864, AI660968, AI709348, E07334, Y14737, Y17957, Y14735, AL122127, AR035227, X16110, AR035228, M87789, V00554, X03604, Z17370, AR038320, AR038306, AR038321, AR038307, D78345, E06997, E06998, I16573, J00231, X06766, A94048, A94061, AL122049, AF113676, AF061943, AL133072, I48978, A08916, I89947, A08913, I89931, A08910, AL133077, I49625, A08909, AL122110, AL133080, E15569, AF017437, AJ242859, AF158248, S68736, AF051325, E07361, AL049452, I48979, AF113013, AL080124, AL137463, AF078844, AF113691, AL050108, AL117585, AL133557, AL050149, L31396, AL049464, U80742, AL133113, U00763, L31397, AL133640, E02349, AL117583, AF125949, AL122123, X72889, AL049466, AR059958, AL080137, AB019565, I26207, I42402, AJ238278, AL133014, X65873, AF111112, AL080060, AF113694, AF113690, AL133093, U67958, AF111851, AL137538, AL117460, AL122098, AF026124, AL122093, AL050277, AL133565, X63574, AL122121, AR011880, A58524, A58523, AF118064, AF118070, AL122050, S78214, U42766, AF026816, AJ012755, X96540, U72620, AF091084, AF113677, AF118094, AF090943, I09360, AF097996, AL137557, Y11254, X70685, AL049314, AL137648, AL137459, E07108, AL117457, AF125948, AL096744, AL050146, AL110225, AL117394, A12297, AL050138, AL133606, AL110280, AL137556, E03348, AL049938, A90832, U62317, AF183393, AL080074, A08912, AL050116, AF119337, I03321, E04233, AL049382, AL137550, U96683, AF090901, AF104032, S61953, A93016, AF003737, X82434, AF067728, AL080159, AL137560, X84990, AL080127, AL133075, AL133016, AL117435, U35846, AL137521, AF113019, AF090934, AF113689,				
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217	HNFI34	800085	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 497 of SEQ ID NO:217, b is an integer of 15 to 511, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:217, and where b is greater than or equal to a + 14.</p>	<p>AL137526, Y16645, Y11587, AL110196, AR000496, U39656, AF017152, AL110221, AF146568, AL137527, X93495, AF079765, AL133560, AF106862, AL080086, AL133104, A65341, AL050024, AJ000937, A77033, A77035, AF087943, AL049430, I33392, AF113699, AL137271, Z82022, A93350, AF090900, AF090903, Y14314, AF177401, AF090896, AL050393, A03736, E08263, E08264, AF185576, I00734, AL137476, AF162270, Z72491, AL110197, E00617, E00717, E00778, AF008439, M30514, AF079763, A07647, U91329, X98834, AL133098, AF153205, AL133067, AR038969, A45787, U68387, AL049300, AL049283, AL050172, AR038854, AL133568, Y09972, AL117440, AF057300, AF057299, X92070, X53587, X87582, U58996, L30117, L19437, I41145, AL137283, AF081197, AF042090, AL137523, AL133081, Z37987, E08631, AJ006417</p>
218	HMSCL38	801919	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2931 of SEQ ID NO:218, b is an integer of</p>	<p>AC004264, Z58476, M27287, I06092, I06091, M27286, I06090, AR067722</p> <p>AA503296, AI334107, AA287363, AW023111, AA704101, AI809776, AI609972, AI380617, AI733856, AA559166, AI066646, AA169245, AA683279, AW327624, AA602906, AA659232, AI755202, AW341978, AA297666, AI978654, AA419403, AA180775, AW274078, AI801505, AA503019, AI801482, AI344948, AA622801,</p>

15 to 2945, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:218, and where b is greater than or equal to a + 14.	AA693366, AA535216, AA654874, AA574442, AA610509, AA225406, AC007637, AC006946, AC002996, AL031984, AC005954, AC012384, AL031311, AC004963, AC002432, AP000501, AC004973, AL139054, Z98036, AC005940, AC005231, AC007172, AC002045, Z97056, AC002394, AC003101, AC016027, AC004815, AC005527, Z83822, AC004106, AC016830, AC006530, AC000025, AC006017, Z95331, AL031291, AC007055, AC005412, AC002039, AP000466, AF111169, AC004000, AL049653, AC007263, AL049778, AL022320, AC002480, AC002470, AL049839, AC005666, Z84480, AC005088, AF024533, AJ003147, AC004991, AC005081, AC004878, AC004216, AL050318, Z98884, AC005702, AL096701, AC005670, AL024498, AC006146, L78833, Z84466, AF001549, Z84469, AL121658, AC005562, AC002115, AF172277, AC000035, AL035659, AC004814, AC009516, AC005529, AC005899, AP000128, AP000206, D87675, AL020997, AC003982, AL121653, AC008033, U95740, AC006120, AP000212, AP000134, AC006211, AC005740, AC007327, AL031280, AC005102, AC002091, AL050321, AL022163, Z85987, AL021918, AC004966, AC005531, AC005625, AC005477, AP000502, AC005859, AC003109, AC004765, AC005777, AL031659, AF051976, AP000245, AC007546, AC005793, AC007687, AC007690, AL031575, AL080243, AC002544, AF031078, AP000210, AP000132, AL049569, AC006536, AC008044, AL034548, AC005778, AC006571, AC005914, AC004876, AF030876, AF207550, Y10196, AC004819, AC006125, U95743, AC010205, AL031848, AC004813, AC004896, AC004895, U85195, AP000967, AC005952, AC005409, AF031076, AC005726, AF045555, AC002366, AC004967, AC004811, AL049757, Z94277, AC005011, AC006538, AC005747, AC005480, U91318, AL049759,
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219	HDQGA42	805448	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 431 of SEQ ID NO:219, b is an integer of 15 to 445, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:219, and where b is greater than or equal to a + 14.</p>	<p>AL035684, AP000008, AC005921, AC006312, Z99128, AC005736, AL031276, AP000133, AP000211, AC004796, Y07848, AC005484, AL121655, AC000026, AC009247, Z93023, AP001054, AC007226, AL035461, AL049843, AF134726, AE000658, AP000557, AL031295, AL133353, AC004686, AL135744, AC004999, AC005483, AF196969, AC004851, AC002347, Z94801, AP000704, AC002350, AL031680, AL035683, AC006285, AL133448, AC005250, AC005789, AC000159, AC004526, AC002477, AC007277, Z94056, AC006277, AC004883, AL022165, AL035420, AC006966, AC005037, AC018633, Z85986, AL020993, AC002072, AC007386, AF129756, Z97630, AC005694, AC005520, AL024507, AC002314, AC002365, AC006441, AL096775, AF205588, AC007130, AC002369, AF217403, AC009509, AL078583, AC008372, AL034417, AC003029, AP000117, AL121754, AL022238, AC006974, AL096766, AP000552, AC007225, AC005089, AC005619, AP000696</p>
220	HFIY89	806690	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by</p>	<p>AA378853, W02326, AC004263</p>

221	HBOEB83	810870	<p>the general formula of a-b, where a is any integer between 1 to 508 of SEQ ID NO:220, b is an integer of 15 to 522, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:220, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1502 of SEQ ID NO:221, b is an integer of 15 to 1516, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:221, and where b is greater than or equal to a + 14.</p>	<p>AI956161, AW190000, AI589324, AI587157, AI620257, AW382926, AW058364, AA947995, AI928558, AW382924, AW205847, AI340074, AW192089, AI936081, AI865798, AI621165, W05054, AI952340, AA987844, N80868, AA780754, AA826612, AA679983, AI537527, F34561, AI802504, F34062, W07601, AI383360, AA423957, R50730, H30138, AA653421, AI678314, AI868144, AW368739, AI382398, H27672, AI962721, AI718900, AI610271, H27673, AA378282, AA912563, N74342, H99256, AA665166, AI919505, AI750257, AW175763, AA437064, R50267, AA658999, H27465, AA216236, T29814, AW196119, AW384132, F29860, Z19585, AF102887, X89963, AF152393, L32137, L27263, AC003107</p>
222	HMEBY61	811047	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1373 of SEQ ID NO:222, b is an integer of 15 to 1387, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:222, and where b is greater than or equal to a + 14.</p>	<p>AI745238, AI866792, AI921886, AI861777, AA174003, AW135052, AA176698, AI741234, AA451980, AW005996, AA398798, AA769370, AI285198, AI656138, AI634167, AA435885, AA974255, AA451905, AA807286, AA742321, AA992110, AI872629, N71936, AI038662, AA918352, N99671, AA363415, AW022372, AW137496, AA303737, T35813, T06979, AA765747, D20163, AA452085, AA093012, AW055049, AI472535, AA915908, AI431714, AA090421, AA478491, AF086107</p>
223	HETDK50	812745	Preferably excluded from the	AI274750, AI133094, AA337234, AA334524,

224	HSIEH63	<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1492 of SEQ ID NO:223, b is an integer of 15 to 1506, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:223, and where b is greater than or equal to a + 14.</p>	AA337774, AA337229, AI652967, AL132708
	812755	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 882 of SEQ ID NO:224, b is an integer of 15 to 896, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:224, and where b is greater than or equal to a + 14.</p>	AI223817, AI432306, AI732256, AI732756, AI827789, AW270969, AI458391, AI820678, AI734150, AI073913, AA487683, AA487468, AI521059, AI906906, AI906910, AI905072, T94990, AW015443, T94936, AA708803, AI285429, N71180, CL4331, D59502, CL4429, AI810047, D58283, D80043, AI366900, AI955866, D80022, AI798456, AI950892, CL4389, AI560099, D80195, D59275, D59859, AI698391, D80166, D51423, D59619, AW161156, D80210, D51799, D80391, D81030, D80240, D80253, D80038, D59787, D80227, AI536685, AI918435, D80188, AW149925, D80212, D80196, AI591420, D80219, D80164, AI537677, AW051088, D50979, D59927, D57483, D80269, AI783504, AI868931, AI287449, D50995, D80366, AI475371, AL046944, D59889, D80193, AW162194, D80024, AI868204, AL036361, AI623941, AI978703, D59610, AI932794, AI564290, AL120853, D80378, AI926878, AW160916, AL042382, AI891084, D59467, AI859991, AW051258, AI624293, AL047675, AI637584, AI627988, AI583065, AI679506, AI677796, N71199, AI611738, AI619502, AI632408, AI802542, AI889189, AI699865, AI288305, AW118518, AI890507, AI570807, AI866457, AI635067, AW026882, AI923370, AI909661,

<p>             AI567769, AI537837, AL039086, AI690426,              AI270183, AI921248, AI874261, AI886181,              AI286256, AI620089, AA449768, AI433157,              AI702073, AI933589, AW169653, AI521103,              AI537261, AW054964, AI472536, AL036673,              AI863382, AI633125, C15076, AI915291, AW152182,              AI537273, AI582932, AI345688, AI500061,              AI801784, AI493567, AI452560, AA641818,              AL039716, AW192652, AI648458, D80241, AI812015,              AI872423, AW198144, AI521560, AW029197, D80045,              W74529, AW193872, AI610690, AI862139, AW238688,              AW079572, AI306613, AI886753, AW024564,              AI824576, AI524671, AA579618, AI523806,              AI469532, AI620284, C75259, AI354998, AW117746,              AI866770, AI886123, AI866090, D51060, AI863191,              AI564719, AI241923, AI445992, AA305409,              AI619607, AI590830, AW080746, AI890907,              AI491775, AI499963, AL036638, AI520809,              AI923989, AI620075, AI890628, AL045500,              AL036954, AI828583, AI866469, AI564426,              AL119863, AW129659, AI352497, AI971615,              AI690887, AI283760, AI917963, AI536574,              AI354630, AC004993, AR018138, Z82022, A62298,              A84916, A62300, Y17188, AJ132110, S68736,              I48978, X67155, AL133640, AF087943, I89947,              A77033, A77035, I48979, AL137478, A65341,              AF111849, AR038854, AB028859, AL050277, A30438,              X82626, AF026124, A08910, AL049283, D26022,              A25909, AF125948, AL137533, A08913, I33392,              AF177401, A08916, AF185576, AL137480, AL133558,              AL049314, D34614, AF081197, AF081195, AL117457,              AL122121, A67220, D89785, A78862, AF017152,              AL133568, AL137550, A08909, AF026816, AF090896,              AL137529, AF158248, AL117435, U35846, AF146568,              AF102578, AF106862, AF058696, AL122110, Y16645,              AL133075, AF090900, AF061795, AF151685,           </p>				
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AL133557, A08912, AR016808, I89931, AL133560, AL137292, AF126247, I49625, AL122050, AL137459, AL110221, AF090903, AL050149, AL050138, AL050393, X65873, A03736, AL110280, X72889, AR038969, AB016226, X82434, AL133093, AL080159, AF183393, Y14314, AF061981, AF113019, AL137271, AF111851, AF079763, AF106657, AF104032, A58524, A58523, AF097996, AF065135, E02349, A07647, AL110196, D88547, AL110222, AL137521, AR011880, AF113694, AL110225, AR008278, AF061573, AJ012755, X83508, AL049452, Z37987, AF113013, A45787, AL080148, A12297, AF111112, AF057300, AF057299, E12747, AL080124, AF113677, AF067728, AL050024, AJ000937, AL133080, AL137560, AJ238278, AL080234, S78214, AL133016, AL137488, Y07905, A21103, AL137526, E05822, Y11587, AL049430, AF113699, AL137523, AL133081, AL050172, AL122098, AL050116, AL122118, AL050092, AF091084, AF090934, AF113689, L19437, AF118064, Y11254, AL049382, AF210052, A08908, X68127, E06743, S36676, A93350, AL023657, I09499, AJ003118, AL050108, I00734, AF008439, AL049938, AL133665, AL117416, AL117460, E07108, E00617, E00717, E00778, AF090901, AL133606, AF113690, AF162270, U67958, AF153205, AL122100, Y09972, AL117394, AF017437, X70685, U58996, X92070, AL080074, U78525, AL122093, AL133113, AL110218, AR020905, AL137429, AL080154, AL096744, I66342, U68387, AL050146, E03348, AL049466, I03321, AL137557, AF031147, AR059958, U96683, U80742, U42766, X63574, AL137665, X98834, AF118094, X87582, X80340, AL137538, E15569, AL133565, AF032666, AL137476, S61953, AF067790, AF119337, AR013797, AF100931, AL049300, U00763, I42402, AL117583, L30117, AL110197, X84990, AB007812, E08631, AF113691,				
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225	HLTDL01	812871	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 113 of SEQ ID NO:225, b is an integer of 15 to 127, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:225, and where b is greater than or equal to a + 14.</p>	AL117440, AL133072, AF079765, AL137463
226	HKAJJ29	813482	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1935 of SEQ ID NO:226, b is an integer of 15 to 1949, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:226, and where b is greater than or equal to a + 14.</p>	<p>AW242647, AI655668, AI633850, AI887937, AI417605, AA634416, AI183462, AI376953, AA424566, AI218544, AI184948, AI377696, AI539469, AW339973, AA063624, AA831419, AI688625, AA626214, AI347185, AA424663, AW294480, AA614526, AI633616, AA128125, AI572132, AI708352, AI380543, AI016038, AI057285, AI739144, AI766183, AI680286, AA804235, AI472896, AI797810, AI523804, AI566251, AI418609, AI919246, AI123682, AI433334, AA443570, AA573340, AI076447, AA978127, H52237, AA355932, C21129, W99365, AI915778, AA404594, AI347186, AI354307, AI950780, AA449456, AA404738, AW297363, AA125816, R15952, AW361031, AI523640, W43027, AW007808, AA401191, AI742321, AI382479, AI573098, AI610754, AI984179, AI805435, T24870, R46666, D45673, AI655084, AI915974, AI968734, AW271334, AI767664, S60885, T66578</p>
227	HTPCH84	815696	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by</p>	<p>AW083241, AW262121, AI718743, AW083914, AW014771, AI857725, AI290210, AA025673, AW204999, AI520716, AW006931, AI561219, AI380034, AW080544, AI282851, AA613366,</p>

228	HWDAC26	821335	<p>the general formula of a-b, where a is any integer between 1 to 1165 of SEQ ID NO:227, b is an integer of 15 to 1179, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:227, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1944 of SEQ ID NO:228, b is an integer of 15 to 1958, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:228, and where b is greater than or equal to a + 14.</p>	<p>AI185297, AI624643, AW272130, AW083605, AA740147, AW316995, W67560, AI910466, AA603704, AA577603, AA514270, AI446656, AA158406, AW080904, AA155646, AA155701, M91489, AI472456, AI862475, AA025672, AA325843, AA639402, AI497736, AI696340, AW272567, AI792287, AF104419, AF217794, AB029011, AF217793, AF134240</p> <p>AI569079, AW069247, AI753828, AI865591, AI954109, W47496, AW023828, AI141750, AA769937, AA650548, AW016594, AW016129, AA846081, AW022937, AA814485, AI081142, AI079440, AI079426, AA846439, AA620438, AA131231, AW020734, AI831067, AW104632, AI092300, AI937843, AI499645, AW328434, AI086700, AA890458, AI167342, AA845479, AW264782, AW162433, AI929801, AI917254, AA758726, AA620745, AI718209, AW163199, AI879416, AW157051, AI831096, AA845982, AI208148, AI918625, R06276, W37886, AI287896, AI446024, AA983344, AI357019, AI866680, AA156113, AI270415, AA805556, AA860503, AW193538, AW129500, AI860930, AW275853, AI830226, AA984928, W94249, AW243935, AI673396, AI865005, AI356933, AI929556, N99095, AA854761, AI066651, AI126823, AA310037, T59402, AI816511, W42492, AI285765, AI816004, AA725401, AA845275, AI079591, AI281631, AA169591, AW157638, AI082058, AI625443, H88070, AI689693, AW151111, AI335993, AI075418, AI598168, AI802736, AI469322, AI074786, AA622660, AI879704, AW162206, AA669402, AI689523, AI689670, AW162290, AW189201, AI815820, AI816168, AI066677, AI699034, AW050807, AA961388, AI050786, AA129992, AA961385, AW247115, AI086957, AI279407, AI358503, AI363769,</p>
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229	HMUBJ22	824071	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1737 of SEQ ID NO:229, b is an integer of 15 to 1751, where both a and b correspond to the positions of</p>	AA036830, AI253553, AI092686, W47486, T40823, AA485263, AW162675, AW162349, AI561101, AA188301, T92747, AW168282, AA668899, AW245055, AI285669, AW157410, AW161998, AA911615, W45057, AW237191, AW027171, W45645, AI985873, AA860081, AW264874, AI434295, AW156975, AW157436, AW162763, AA845874, AI539679, AW157210, AA719915, AW073770, AI439823, AW157662, AA838778, AI439082, AW272644, AW272510, AW276298, AA152231, AI366693, AI360047, AI766455, AW005956, AA132113, N22122, AA772296, AI952289, AW263586, AI783918, AA133305, AI273093, AI572769, AI932663, AI749817, AI193366, AA845853, T25472, AI095236, AI085216, AA079801, AA970283, AW157119, N75969, T59403, AI270023, N94935, AA586988, AI886873, AA897555, AA845202, AA897553, AW162566, AA723596, AW157636, AW189049, AW268368, AI879692, AW162155, AW162599, AW157639, AW055327, AI749688, T52859, AI916356, AW103542, H59734, AA187131, AA186705, AA169466, AI626111, AI364754, AA223735, N59419, AA704116, AI185608, AA724889, AI138978, AI186065, AC004947, AC008014, AC009501, AL078604, AE000659, AC004554, AC004470, AC006203, AL022399, AC002527, AC007370, AL050309, AL020989, AL009028, AC007748, AC018359, AC004943, AI472209, AI128494, N44784, AA846525, AI924487, N35474, H12801, R70032, W58562, AA330895, AI220794, R76119, AA359093, R70079, W57813, R24406, R76176, AA377264, H12758, D62600, AI582551, R24407, W58563, AA328446, W57830, AI267376, AI583065, AW104724, AI590227, AI436644, AI445025, AI637584, AA523183, AI433157, AI613017, AI799199, AI636719, AI538716, AI499463, AI499131, AI572787,
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			nucleotide residues shown in SEQ ID NO:229, and where b is greater than or equal to a + 14.	AI440239, AI564719, AI828731, AW198090, AW129170, AI475451, AW148320, AI567351, AI097248, AI453322, AI440426, AI520793, AI284020, AI520785, AI702073, AI432969, AI536638, AI869367, AW243820, AI580984, AW149869, AI619502, AI862142, AI539687, AI687127, AW075413, AI640379, AI926790, AW151485, AI802542, AI273142, AI568855, AI678989, AI811344, AI597750, AI627360, AI812107, AI570989, AW131954, AA225339, AI871697, AI924971, AI690312, AI677796, AI439087, AW026882, AI745713, AW088043, AI872711, AI520862, AI281773, AI480118, AI538829, AW169653, AI274013, AI654750, AI572676, AI874261, AI119457, AI824557, AI628205, AW102785, AI888501, AI784252, AI439745, AI569583, AW088793, AI630928, AI282903, AI648509, AI816947, AI857296, AI873731, AI890833, AI273048, AI560099, AI699857, AI269205, AI590415, AI567128, AI609592, AI862144, AI673710, AI702068, AI815232, AI863014, AI886124, AI885974, AI923357, AW195957, AI824764, AW078529, AI625079, AI862139, AI801766, AI950664, AI499381, AI680498, AI921248, AI559296, AI886753, AI687362, AI702433, AI815855, AI680435, AI580240, AI874109, AW071417, AI537677, AI673256, AI499393, AI120736, AI801608, AI623396, AI635461, AI349598, AI590021, AI271786, AI633125, AI499512, AW087445, AI702406, AI873704, AI524526, AI634737, AI475134, AI866111, AW082060, AW148408, AI636445, AW075667, AI573032, AI886206, AI537303, AW086113, AI590118, AI801322, AI634224, AI521244, AI475817, AI648663, AI540832, AI934035, AI280747,

AI696612, AI282504, AI500553, AI889376, AI284484, AI608936, AI632033, AI538259, AI469532, AI349004, AI433976, AL041772, AI536685, AI254731, AW073865, AI859402, AI610756, AI610690, AI275175, AW080079, AI570909, AL042382, AI597918, AI445414, AI290154, AI436456, AL135661, AI587114, AI679916, AI439762, AI624548, AI283941, AL043326, AI474107, AI620284, AI868831, AW238730, AW117882, AI492540, AI539771, AW132056, AW071349, AW301409, AI476046, AI568854, AI921082, AW085799, AI671679, AI500659, AI281762, AI828818, AI612913, AI859733, AW150578, AI824444, AI500523, AI804585, AI539808, AW089572, AW168384, AW132034, AI678302, AI064830, AI568870, AL121365, AL049844, Y11587, L31396, I48979, L31397, AF090900, AF113694, AF090934, AL117457, U42766, AL080060, AL049314, S78214, AL122050, AL133640, AL080137, AL110196, AF090943, AL137527, I89947, AF113690, AF113013, I89931, X84990, AF090901, AL117460, AL050116, AF113691, A08913, AL133557, Y11254, AF078844, AL050108, AF104032, AL133016, AF118064, AL049452, A08916, AL133606, AL049938, AL050138, AF113677, AL050146, AL050393, E03348, AF113689, Y16645, AF017152, AL133093, AR059958, AF113019, S68736, AF090896, A93016, AF113699, AL122123, E07361, AJ242859, AF125949, AL133080, AF090903, AF118070, AB019565, AL133075, AL050149, AF113676, AF158248, AL122093, AF106862, AL080124, AL133565, AL110221, I48978, X63574, AL122121, AL050277, AF125948, AL137557, AL049466, AL137459, AL137283, AJ000937, AF111851, AF091084, AL137550, X82434, A65341, AF146568, AL049382, I49625, AF079765, AL117394,				
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230	HMSDI67	827298	<p>AF017437, AL096744, AL117585, AL049464, U91329, AR011880, AL110225, AF097996, E07108, AL049300, E02349, A08910, AL133560, AL117583, AF177401, AL080127, AJ238278, AF067728, U00763, AL137271, AF118094, A58524, A58523, AL049430, A08912, Z82022, AL122098, AL050024, AL117435, A08909, AL122110, AF183393, U72620, AL137538, X70685, I09360, A77033, A77035, AL133113, AL137648, X65873, I03321, AL137463, A12297, AF087943, I00734, AL049283, I33392, U80742, X96540, I42402, A03736, X93495, E00617, E00717, E00778, AF095901, S61953, U35846, AL137521, X72889, AL137523, AF061943, AL035587, AF081197, X98834, AJ012755, AL080159, E08263, E08264, AL110197, AL133072, AL096776, AL133067, U67958, AL022147, AF111112, AF081195, I66342, AF119337, E15569, U96683, AC004093, AC006336, Y09972, AL133568, AF000145, AF106827, I26207, AC004987, AC006371, X62580, AL133077, AF177767, AC004690, I17767, A93350, AC007390, AR000496, U39656, AC002464, X52128, AL133104, AR038969, E05822, E04233, AL137560, M30514, AL137556, AL122049, AL133014, A08911, AF100931, AL137526, U95739, AF003737, X87582, AL122111, AF210052, AF026816, AC007298, Z37987, AF026124, Y14314, AR013797, AC002467, AL080074, AF162270, Z72491, A45787, AL117440, A07647, AL110280, U49908, AF079763, AL050172, AF057300, AF057299, AL133098, AC007458</p>
			<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2139 of SEQ ID NO:230, b is an integer of 15 to 2153, where both a and b</p>

231	HWLEZ80	827315	<p>correspond to the positions of nucleotide residues shown in SEQ ID NO:230, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1346 of SEQ ID NO:231, b is an integer of 15 to 1360, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:231, and where b is greater than or equal to a + 14.</p>	AW001287, AW300770, AI936111, AI691072, AA622758, AA563933, AI245950, AA622120, AI801582, AI348065, AA847242, AW001308, AA622570, AA552519, AA552362, AI660557, AW050790, AA582787, AW000826, AA643708, AI732367, AA643616, AI673534, AA857546, AA514424, AA297147, AA298484, AA543029, AA297176, AI821215, AA025434, AI732198, AA470683, AI582013, AI749731, AA025433, AI870192, AI281867, AI633125, AI670009, AW167918, AI627988, AI433157, AI702073, AI679098, AI453767, AI249877, AW152182, AI916419, AI637584, AI440399, AI284484, AI345416, AI345612, AI824576, AW151893, AI345415, AI493576, AI687362, AW083374, AI698391, AW190194, AI685798, AI922577, AI815237, AI677796, AI634682, AI884318, AI685005, AI500714, AI805638, AI538564, AA502794, AI469532, AL046466, AI538850, AI799674, AI866770, AI719817, AW072719, AI579901, AI890223, AW198090, AI690748, AI684305, AI798456, AI457589, AW191844, AI445025, AI571439, AI635925, AW105431, AA830709, AI283760, AW268302, AI521628, AI633196, AI811344, AI151101, AL135024, AI973152, AW104827, AW302954, AI610690, AI887308, AW090071, AW129722, AI567128, AW193231, AI915291, AL039086, AI336582, AI638798, AI888501, AI889376, AI564719, AI473536, AW104141, AL046618, AI687065, AI432030, AI540674, H89138, AI269862, AI587114, AL036673, AI689175, AA916133, AW088628,
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	AI912356, AI909641, AI445829, AL046595, AI631216, AI669459, AW301505, AW129916, AI651840, AW162194, AI357940, AI933574, AI635032, AI613038, AI890907, AI796743, AI358784, AL038529, AW193949, AI567582, AI500588, AI520785, AI499285, AW104724, AI521382, AW169604, AI690813, AI925502, AI522052, AW105383, AI921281, AI923768, AI282307, AI349772, AI590043, AA019328, AW243886, AI889189, AI766348, AI583085, AI539153, AI812107, AW026087, AI538055, AI890183, AW075667, AW148408, AI633000, AI499393, AW301754, AI811840, AI554821, AW301513, AW020397, AW090550, AI469112, AI362248, AI828574, AI866082, AW193530, AW073270, AI472566, AI659334, AI798351, AI680388, AL037454, AI744330, AW130134, AI866801, AW087207, AI758735, AI884528, AI921254, AW075669, AA872507, AL120676, AW078818, AL037649, AI491805, AI921464, AI768496, AI887381, AI267162, AI241923, AI583065, AI241744, AI819326, AI673363, AW148363, AI890182, AI620003, AI567612, AI263312, AI619502, AI961589, AI582912, AI539800, AA641818, AI434223, AI890507, AI568865, AI520862, AI677646, AI138480, AI553645, AW152459, AI620056, AI689379, AI610115, AI653979, AI282930, AI802542, AI499131, AW028416, AI963458, AI613270, I95745, AF113677, AF061981, AF008439, AF032666, AF030513, AF090900, I48978, X99257, I89947, AL050149, AR038854, A65341, AF159615, AL080148, AF026816, A21103, AL117416, A08916, L04849, Z82022, AL137533, A08910, A08909, AL137550, A08908, AB007812, AF000301, AL133010, U00763, AI5345, AL133558, X79812, E05822, A77033,

	A77035, A08913, AL122100, AF090903, AL080140, U78525, AL133113, AL133016, AL050366, D83032, A18777, X87582, A08912, Z97214, S36676, X84990, AL133093, X63410, AF090901, X93495, AL137476, X81464, L19437, AF067728, AL050116, S77771, AF139986, AJ005690, AL137537, Y11254, I33392, AL137560, A76335, AL110296, AF183393, AF111849, AL133075, A21101, AF061573, AF102578, AF106862, AL110280, S75997, AF091084, I89931, AL080159, AF176651, I48979, AL137479, I89934, I49625, A08907, AL133637, X55446, AL133665, AL137488, E12747, AL122110, A65340, AJ000937, AL137640, X80340, E02349, U58996, AF153205, AR059883, AL122045, A45787, A52563, AL137292, AL117392, AF067790, AL049996, S78453, AL133624, AF094480, AL137558, AJ003118, A03736, S76508, A18788, X62580, E06743, AL117460, AL133557, M96857, AF061795, AF151685, AF180525, AL137463, X82434, AF028823, AL137530, U90884, AF115392, I03321, U49434, AL137526, AL122106, I17544, AL117435, Y10080, AF017437, AF126247, AL049938, AL049382, AL050138, AF111851, AL049452, I09499, AL133014, AL122093, U35846, AL133112, I68732, AR020905, AF113019, AF087943, AL080154, AF031147, AF079763, X52128, AL137529, Y14314, AL137547, AL050155, AL133619, AL137555, X65873, A23630, AL137480, AL110218, X53587, AF113691, U88966, U75932, AL133067, Y16645, AF118094, AL137557, U67958, AL050172, AJ238278, A07647, AF125948, AL117629, AL137656, AF016271, X72889, D55641, I89944, AL137429, AF003737, AL050277, AL049460, I09360, AR038969, AF118092, X72387, E01314, AL117440, AL137294, AF137367, AL080163, AJ012755, A58524, A58523, AF113690, AF090934, AF100931, AF118070, AL137478, AR029490, AR034830, I96214, AL023657, AL096744, D16301,

232	HAIDQ59	827562	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1972 of SEQ ID NO:232, b is an integer of 15 to 1986, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:232, and where b is greater than or equal to a + 14.</p>	<p>AL137527, AL137300, AF106945, Y16258, Y16257, E02756, Y16256, S63521, X56039, L13297, Y11587, Y10936, U95114, AF132676, AF061836, AL137459, AL122098, A93350, AF017152, AL137712, I66342, AL133077, S68736, I32738, U42766, AF000145, AF113013, A08911, E15582, A93016, AC004987, AC005992</p> <p>AI924594, AI743596, AI858588, AI224926, AI224499, AW269972, AI912537, AW449848, AA310864, AA142919, AA044227, AA044346, AI351703, AW006246, M85736, AW184000, AW272762, D20174, AA781373, AA099647, AA035762, AI424574, AA249562, AA035169, W55946, AI872574, AJ271442, AF054839</p>
233	HTJN176	827721	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 691 of SEQ ID NO:233, b is an integer of 15 to 705, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:233, and where b is greater than or equal to a + 14.</p>	<p>AA418995, F02945, Z39686, AL121270, AI370623, AL040844, AI927233, AI862139, AW189802, AI522256, AI590043, AI539260, AI540354, AI307513, AI909561, AL042722, AA715307, AA809974, AI633317, AI270183, AI582932, AA748353, AI797578, AI434255, AI064830, AI698462, AA761557, AI568293, AL119863, AI445611, AI932620, AI799313, AI758560, AI683555, AI417790, AI690969, AI688241, AI571442, AI364167, AI282669, AI537273, AI638644, AI468970, AI624543, AI435253, AI095003, AA731184, AI610714, AI698391, AW085181, AI909672, AI919600, H44725, AI673395, AI635082, AI439452, AI050084, AI673363, AA814343, AI800341, AI470717, AA676361, AI866484, AI079226, AI679266, AI500714, AI872423, AI524179, AL046466, AW044367,</p>

234	HBNAPI7	827740	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 824 of SEQ ID NO:234, b is an integer of 15 to 838, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:234, and where b is greater than or equal to a + 14.</p>	<p>AI610411, AI918809, AI866469, AW087540, AW087445, AI799183, AI273179, AW081176, AI299035, AI521560, AW188525, AW128834, AI915291, AW152182, AI889189, AW051088, AI473536, AF067844, I89947, Z13966, M85164, AR050959, E12888, A65340, AF090903, D83032, D44497, AL110223, AR038854, AJ003198, AF087943, AF000167, U37359, AL122049, AL110158, AL137716, A23327, Y14314, AF129131, AL133051, AC005520, AI2558, A38574, X83544, AL117587, AF141289, AF124728, AL117416, A08456, A31057, AL133015, AL133608, AL050155, A52184, A84109</p> <p>N48618, R71006, R42033, N53377, AI872447, R22316, R43706, AW377511, R21513, R63113, AA678428, AA912400, AI272997, R70954</p>
235	HWLFM26	828180	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1396 of SEQ ID NO:235, b is an integer of 15 to 1410, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:235, and where b is greater than or equal to a + 14.</p>	<p>AI732659, AI791955, AA577625, AW083143, AW138645, AI174394, AI696819, AI608936, AI249877, AI699011, AW029611, AI280732, AW089179, AL121286, AI799199, AI680162, AI625467, AI648663, AI828731, AI499285, AW088899, AI758816, AI633419, AI796743, AI610115, AI582932, AW088903, AL040241, AL036146, AA464027, AI913452, AI520702, AW190042, AI932794, AW073994, AI889953, AI933785, AI520809, AI888944, AI648502, AI468872, AW193026, AI344817, AI929108, AI569309, AI608676, AI917963, AI866831,</p>

	AI922901, AI859464, AI537677, AI119791, AI251830, AI679179, AI587606, AI627893, AW084219, AW151785, AI571909, AW089350, AI446373, AI591316, AI537991, AW129916, AI611738, AI478123, AI619716, AW169275, AI499263, AI476109, AL047763, AI866608, AA427700, AI802542, AW118518, AW023590, AI688858, AI539153, AI439745, AI873604, AI270183, AI591420, AI889376, AI888501, AI922676, AI524671, AL036638, AW071417, AI500061, AI829327, AI288305, AI866573, AI365256, AL042628, AI648684, AI538085, AI923370, AI635464, AI824746, AW151729, AI783504, AW268220, AI471548, AL119863, AI280661, AI334450, AI287326, AI584140, AI537617, AI698401, AI343059, AI859402, AI288285, AW169671, AW168795, AI273142, AI349933, AI591407, AI670782, AW129230, AW079572, AW081255, AI174591, AW102785, AW103893, AI561299, AI873704, AI446003, AI251221, H89138, AI539028, AI888953, AI250663, AI281782, AI689175, AW129202, AI554218, AI866002, AI431909, AI889306, AI433976, AI540821, AW079159, AI873644, AI955917, AI811863, AI687065, AI612759, AI610645, AI867042, AI569328, AW051258, AI687465, AI919345, AI249257, AI919107, AI439443, AI689420, AI554427, AI673256, AI284131, AI912510, AI680165, AW088134, AI819976, AI570807, AI366549, AI636719, F27788, AI249962, AW235745, AI564719, AI269696, AI801325, AL043326, AI921176, AI886124, AI955866, N80094, AI499986, AI611743, AI498579, AI963216, AI445165, AI590120, AW082594, AI619502, AI251205, AI677796, AW083804, AW149227, AI282326, AI696626, AI689571, AI633125,

AI589993, AI282903, AW026882, AI491783,  
 AW151136, AL037582, AL037602, AA833760,  
 AI572418, AI539771, AI500523, AI916419,  
 AI344928, AL120853, AI799234, AI783792,  
 AI680498, AI364788, AW151714, AI568765,  
 AI921248, AW167918, AI670009, AI632408,  
 AI352497, AI474107, AI862144, AI538342,  
 AW081036, AI610799, AI433157, AW198075,  
 AI702073, AI097248, AI912866, AI269862,  
 AW083189, AI698391, AI627988, AI570909,  
 AI678357, AI917252, AL043981, AI804983,  
 AI250293, AI308032, AI889189, AI590423,  
 AW059713, AI344785, AW071349, AI963846,  
 AI866780, AL079963, AI590686, AF067797,  
 AB013456, AL137271, AF183393, AJ000937, I89947,  
 I48978, U80742, AL137463, AL117435, AL050138,  
 Z82022, AL117585, A08913, I48979, AL049382,  
 A08916, I89931, A08910, I49625, A08909, X82434,  
 E03348, A77033, A77035, U00763, X84990,  
 AL133014, AL080159, AR059958, AF090903,  
 AL050116, AF017437, AL137550, S68736, AL133075,  
 AF067728, AF111112, AL122121, AL080060,  
 AF113690, AL137538, AL117460, AF106862,  
 AF113691, AF113689, AL122098, AF113676,  
 AF090901, AF091084, AL049466, AF017152,  
 AL050149, AL133016, AF177401, AL080124,  
 AL137527, AL049938, A58524, A58523, I09360,  
 AL133093, A65341, Y11587, AF111851, AL080127,  
 AL110221, AL080137, U67958, I33392, AL117583,  
 X65873, U35846, AJ012755, X72889, AF118070,  
 AL122050, AJ238278, AL133640, AL050277,  
 AF090900, AF125948, AF104032, AF118094, I42402,  
 S78214, AF158248, AL050393, AL133565, U72620,  
 AL122110, AF113019, AF090934, AF113677,  
 AL133557, AF146568, AL133113, X93495, AL137476,  
 AF118064, AF113699, AF113013, AL096744, I03321,

236	HPWBE34	828552	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 408 of SEQ ID NO:236, b is an integer of</p>	<p>AL049430, AF125949, AL133072, AL122093, X96540, AF078844, A93350, AL133560, AF057300, AF057299, AL049452, AL050024, AF087943, AL049464, E15569, E02349, U96683, E07108, I26207, A03736, AB019565, AF119337, AF113694, Y16645, AL110196, AL133080, A12297, AF079765, AL137556, AF090943, AF097996, AL137557, Y11254, X70685, AL049314, AL137648, AL137459, AJ242859, AL117457, L31396, AL133077, AL050146, AL050108, AL110225, AF090896, AL117394, U42766, AL133606, AL137521, L31397, X63574, AL122123, AR011880, E07361, A08912, AL137283, A93016, AR000496, AF061943, U39656, Y14314, X98834, AL122049, AL080074, AL137560, A45787, AF026816, AL133067, AL049300, AF185576, AL110280, AL133104, AL049283, AL110197, U91329, E08263, E08264, X87582, AF026124, S61953, AF153205, AR038969, AF003737, AL137526, E04233, E05822, AF139986, AL050172, AR038854, I00734, AL133568, AF162270, E00617, E00717, E00778, Y07905, AL117432, AL110222, AR013797, AL133098, AL117440, AL137523, AF079763, A07647, AF032666, Z72491, AJ006417, U49434, M30514, L30117, Y09972, E02221, X92070, AL137480, AF008439, AL080086, AF051325, AF106827, AF081197, L19437, A90832, AL137478, E08631, AL137292, AF132676, AF061836, U58996, U68387, AF061981, AF000145, I09499, AF030513, A18777, AL137533, AL122118, Z37987, U78525, AL137488, U49908</p>
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237	HPICC36	828670	<p>15 to 422, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:236, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 337 of SEQ ID NO:237, b is an integer of 15 to 351, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:237, and where b is greater than or equal to a + 14.</p>	W38772, AL121658, AP000221, AP000084	
238	HFOYL30	828919	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2668 of SEQ ID NO:238, b is an integer of 15 to 2682, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:238, and where b is greater than or equal to a + 14.</p>	<p>AI744708, AW195189, AI567690, AI636216, AA573208, AI770017, AW043759, AI498049, AA044702, AW262016, AI870208, AA604766, AI871593, AI024493, AA811364, AI076816, AW196812, AI808776, AI671756, AI889646, AI026715, AI492059, AI471570, AI620499, AW197581, AI823864, AI333865, AA215699, AA827699, AI418230, AA687610, AI352690, AI809179, AI192245, AA165090, AW009124, AA452233, AA872073, AI741271, AI653120, AI650712, AA970415, AA832103, AI343962, AA983520, AA215698, AW183624, AI078739, AI090246, AL120880, AA748672, R60694, AA236759, AA572872, AW090259, AA921700, AA846153, C05080, AA311867, AA279597, AL047372, AA827669, AA573732, N67681, AA233196, AI459874, W03490, T71638, AI214331, AA279707, AA287907, AA707478, AI359040, R60096, R83679, AI289060, AI650844, H05912, AI217111, AA829127, AA164628, R60695,</p>	



239	HLXNE31	829084	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2240 of SEQ ID NO:239, b is an integer of 15 to 2254, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:239, and where b is greater than or equal to a + 14.</p>	<p>AI611637, R76255, AI520792, AA563637, D57637, AW269651, AI207070, N25487, H47924, AA927138, R59811, AA428534, AW016412, R09373, AA922885, AA281966, AI364898, AW380537, AA832297, H47952, AA256822, AW361767, AW362877, Z42877, AA287901, N49731, T66772, R00758, H71735, N52660, R19577, AA332300, N35542, R12645, T66771, R60034, AW361821, AA296795, H47622, R81371, AW380553, AW371044, C16465, AI088957, R82695, AA640415, R09044, R76537, AI674152, AA732075, H47647, AA333539, R20545, AI818076, T80114, R59701, R08935, R09255, T85695, AI674659, AI472521, R22041, AW074510, H72298, Z39011, AA375569, R22097, AI967952, AA832071, R00759, H04415, AA296768, AW058363, AA878346, T10679, R81370, AA044638, T35538, T10654, AA429489, N75596, H04390, AI268211, AA233182, AA449937, T10678, AL047373, AI472614, AA857658, AA249709, AA506814, AA256480, X98743</p>
240	HLHDP51	829148	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2240 of SEQ ID NO:239, b is an integer of 15 to 2254, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:239, and where b is greater than or equal to a + 14.</p>	<p>AW006185, AI768583, AI478210, AI961367, AA325913, AI016551, AI969521, AA541564, H08324, AA481307, AI796280, AI700943, F12538, AI253203, M79105, D61659, AI446463, AA234756, R80743, D31043, AA918745, AI872577, H08226, AI801745, AA916892, H01753, AA047218, AW235864, H01007, R80744, F10158, AA321948, T74147, T90520, D29218, AI867441, AC000399</p> <p>WG3702, W31740, T70817, H97087, N28699, N59032, AI769216, N23037</p>

241	HCRMY95	829161	<p>is any integer between 1 to 1043 of SEQ ID NO:240, b is an integer of 15 to 1057, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:240, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 484 of SEQ ID NO:241, b is an integer of 15 to 498, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:241, and where b is greater than or equal to a + 14.</p>	<p>AI656382, AI628467, AI224464, AI424378, AI829173, AA633233, AI250830, AI343293, AI439234, AI000662, AI968883, AA668914, AI471610, AA703988, AI745572, AI080698, AA705594, AA644096, W28213, AI638510, AI436721, T23539, AI287794, AI620156, AI417937, AA330796, AW393139, C20991, AW393157, AI424582, AI682102, AI783823, AW083234, AF019767, AC007707, Z95118, U41287</p>
242	HAQBZ89	830123	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1770 of SEQ ID NO:242, b is an integer of 15 to 1784, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:242, and where b is greater than or equal to a + 14.</p>	<p>AI436552, AW071796, AA307090, AI334145, AI299053, AI161282, AI613263, AI018067, AI934889, AI921361, AI984679, AI281829, AI689644, W52097, AA121294, AA236375, AA729045, AI432541, AI342850, W16450, AA608803, N78654, AW135827, N46334, N63941, AI159772, AA456075, AA130122, AW193167, N58535, AW170746, AA367722, AA969946, AA781924, AA862441, AA829498, AW304842, AI299054, AW194058, T69736, AI382899, AA257021, AA345125, AI049756, AI983846, AI129698, AL042538, AL042537, AW148867, T70395, AA130159, AA455578, AA833560, AW351523, AA451639, AI205015</p>
243	HYAAS90	830151	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by</p>	<p>AI434790, T66016, AW138638, C19035, AI434384, AA486622, D63194, AC005841</p>

244	HLDGP20	830194	<p>the general formula of a-b, where a is any integer between 1 to 922 of SEQ ID NO:243, b is an integer of 15 to 936, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:243, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1367 of SEQ ID NO:244, b is an integer of 15 to 1381, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:244, and where b is greater than or equal to a + 14.</p>	<p>AI986236, AI859317, AA608599, AI635273, AA748781, AI683474, AW194113, AI492577, AI924236, AL038585, AI963145, AI671701, AA670171, AI813524, AI963296, AA075646, AI906409, AA854939, AI207809, AW172899, AI906399, AI860387, AI982545, AW025569, AI567678, AA573205, AW168264, AI906381, AI608995, AI922976, AA573965, AW440311, AA582829, AI805576, AA772156, AA622814, AW439237, AI744975, AW275874, AI963012, AI610192, AA837022, AI954459, AW172847, AA485929, AW192542, AI819567, AI636299, AW338983, AW085491, AI634686, AI679270, AW340852, AA700630, AI828488, AI697440, AW245402, AW273499, AI805444, AW088463, AI366911, AI560045, AW264578, AI679498, AW303830, AW440593, AW303782, AI950842, AW167472, AI884402, AI986008, AI884735, AI539237, AW003617, AI690883, AI813736, AI671693, AI355865, AW245759, AI985228, AW276537, AI809346, AA069803, W29046, AI589731, AL040289, AW070904, AI890740, AW264229, AW245996, AI033519, AI453142, AI689109, AW276169, AI972119, AI288297, AI218219, AA604163, AI859246, AI572978, AA133328, AW249464, AW104809, AA599098, AA492525, AW249475, AI982698, W74583, AW438805, AI124730, AI669473, AI207897, AI288340, AI689280,</p>
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AI954465, AA211753, AA487283, AI499310,  
AI826871, AA629856, AA609812, AW246564,  
AI680018, AA587341, AW246548, AA160739,  
AI445565, AA070356, AW304907, AI445053,  
AW083119, AA629703, AA075645, AA558212,  
AA161206, AA186725, AW052004, AA485642,  
AA834135, AA160685, AI679581, AI571490,  
AA487401, AA664215, AI693883, AI138526,  
AI689451, AI636150, AA758418, AI633487,  
AI888240, AW337561, AW246075, AI952857,  
AI539247, AA143273, AI679844, W56420, AA668581,  
AW249898, AI092181, AA160740, AI130818,  
AI905415, AA670453, AA773081, AA566065,  
AW251031, AA181325, AI138527, AI860529,  
AI569942, AA838049, AA586678, AI131213,  
AW103438, AI188431, AW250182, AI679404,  
AI540075, AA813391, AA179388, AA563863,  
AA932527, AI911930, AA635152, AI499251,  
AI445675, AI499153, AA568617, AI446642,  
AA069850, T63354, AI281320, AI581190, AA488736,  
AA838058, AA988742, AI986142, AI689417,  
AI751582, AA420688, AW176613, AA420611,  
AA683160, AI684075, AI879686, AA565107,  
AW074356, AI669848, AI951510, AA292898,  
AA187757, AI682010, AA629761, AA134003,  
AI190064, AI570329, AA932101, AA630013,  
AA574048, AI002611, AW196660, AI460234,  
AI186962, AA173899, AA909853, AA213972,  
AA666318, AA788835, AA772997, AA569079,  
AW238706, AA076380, AW327437, AA187070,  
AI906363, AA308176, AA600185, AI884342,  
AA218951, AI991867, AA160637, AI288053,  
AA570258, AI624787, AA227038, AA774162,  
AI859839, AI342186, M16660, AL136543, M18186,  
M36829, S45392, AC006226, J04988, X70101,  
U89945, S46109, D17148, D16979, T51023, T51115,

245	HWLJS42	830231	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a</p>	<p>T52795, T53595, T56300, T56767, T59691, T59827, T59904, T72200, T72269, T92900, T92990, R07165, R07217, R44334, R49609, R44334, R49609, H11106, H20800, H22618, H42472, H43453, H50320, H50321, H69947, N20118, N21306, N26128, N63140, N67225, N67232, W45407, W56419, W72419, W76279, W94626, W94710, AA029459, AA029524, AA034511, AA035053, AA035563, AA039819, AA041465, AA053002, AA055974, AA056002, AA070320, AA074029, AA074039, AA074189, AA074336, AA084435, AA084465, AA084453, AA085290, AA086454, AA099172, AA101922, AA101959, AA099618, AA102011, AA112794, AA126226, AA126304, AA128510, AA129955, AA133875, AA128443, AA133403, AA130990, AA131028, AA132940, AA135158, AA135628, AA146730, AA151853, AA155641, AA155696, AA155726, AA157967, AA158903, AA158902, AA158943, AA158944, AA159293, AA159526, AA160558, AA165357, AA167787, AA169218, AA169512, AA169691, AA176365, AA179272, AA180903, AA181001, AA181508, AA182781, AA188120, AA187152, AA190896, AA199819, AA223210, AA223254, AA232399, AA233288, AA243192, AA252285, AA492171, AA492254, AA503950, AA507398, AA513704, AA513757, AA515944, AA525799, F17110, AA603895, AA617883, AA635987, AA570078, AA570419, AA838454, AA838636, AA856831, AA910298, AA927706, AA937900, AA953604, AA969555, AA973234, AA978074, AA985430, AA985432, AA994207, A1014411, N84537, N85082, W22113, W22114, W22431, W22639, W23207, W23271, N88675, AA640915, AA092777</p>
				<p>AAW265252, H44724, W23148, AA309106, Z99916</p>

246	HWLEH32	830316	<p>nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 765 of SEQ ID NO:245, b is an integer of 15 to 779, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:245, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1217 of SEQ ID NO:246, b is an integer of 15 to 1231, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:246, and where b is greater than or equal to a + 14.</p>	AL045327, AL134524	
247	HWLGI62	830343	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 837 of SEQ ID NO:247, b is an integer of 15 to 851, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:247, and where b is greater than or equal to a + 14.</p>		
248	HWLEL81	830347	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a</p>	AI860838, AI262526, AI346357, AF127035	

			nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1788 of SEQ ID NO:248, b is an integer of 15 to 1802, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:248, and where b is greater than or equal to a + 14.	
249	HWHPA71	830382	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 430 of SEQ ID NO:249, b is an integer of 15 to 444, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:249, and where b is greater than or equal to a + 14.	AI289640
250	HWABR83	830436	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1732 of SEQ ID NO:250, b is an integer of 15 to 1746, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:250, and where b is greater than or equal to a + 14.	AL041152, AW382888, AI670894, AI693476, AI816778, AW382934, AA009460, AA039526, AA588539, C14631, AI312071, AA574253, D79482, AA719231, AW025952, AW183293, AA975094, H21426, D62183, C14892, AI150955, D60830, D79908, AA039527, R38418, R62385, AA827525, AW192665, AI452868, AI198632, D59953, AW236650, F02876, Z39597, R63785, Z43527, F06606, AA381898, AW103595, AA490811, R51559, F10125, T89041, D62194, AA665024, T74335, F12505, C14891, N55964, N55384, R51649, F01904, F05649, AL049001, AL040440, R12847, AI799322, AB020663, AA628912, AI588942, AA476470, AI217729, AI277746, AI580835, AW076024, AA707226, W45257, W45250, AI493186, AI079437, AA476471, W42998,
251	HUVDZ54	830465	Preferably excluded from the present invention are one or more polynucleotides comprising a	

252	HUIFAR83	830498	<p>nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1921 of SEQ ID NO:251, b is an integer of 15 to 1935, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:251, and where b is greater than or equal to a + 14.</p>	<p>AI085908, R67108, N27271, R74606, N25505, H97692, AI095274, D79002, H82168, H50992, AA362185, R62297, H69600, R95019, R63431, H81869, AW381180, T29164, AA381507, W42991, N35785, R63379, AW381181, T49159, T49158, R62298, AA381246, H81870, R74493, N40004, N49447, H82067, AA362148, AA375059, AA381277, AA373662, R34776, AA780135, AA032091, AA381963, AA381764, R66377, N20476, R34790, AA381739, N33601, AW059573, D19741, H51644, H69601, R34685, R94935, AA382051, AA091273, AA034104, AA381521, R34674, AA133425, A10352, J02685, A02514, J03603, I08064, Y00630, A10503, A21238, M18082, A31184, A21239, A21240, A20470, A20472, M24657, M31551, X16490, AC009802, AJ000386, M31548, M24651, M23092, M31547, M24656, M31550, M24655, M31549, M24653, M24652, M24654, A21254, AF069691, M31546, J04606, M22469</p>
252	HUIFAR83	830498	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1905 of SEQ ID NO:252, b is an integer of 15 to 1919, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:252, and where b is greater than or equal to a + 14.</p>	<p>AA522604, AI522088, AI091623, AA127809, AI827028, AI651539, AI129382, AI144537, AA121481, AI135280, AI351377, AA308961, W45647, AA464072, AI279725, AA464720, AA227751, AA927818, AW137760, AA152350, AA400422, AA464011, AA308959, AA463936, AA128074, AA126898, AA152351, W45665, AI273133, AA227750, AA627307, AC004940</p>
253	HTLHR67	830540	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2454 of</p>	<p>AI693712, AI636929, AW207611, AI269076, AI862893, AI651226, AA676814, AI075189, AW025012, AI686847, AW086624, AW079555, AW268830, AW183904, AI922835, AI738952, AI221764, AI802683, AI636780, AI308833, AW205872, AW193425, AW088829, AW295762,</p>



254	HTSGO78	830568	<p>SEQ ID NO:253, b is an integer of 15 to 2468, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:253, and where b is greater than or equal to a + 14.</p>	<p>AA890663, AI189401, AA772008, AA176693, AW169475, AI023228, AI686947, AW192064, AA970087, AA055141, T35708, R99043, AA962735, HI2306, AA173467, AA046203, AW371197, AA706756, AI040470, R15832, AW338490, AI636713, AI761455, AI470499, AA173411, T17247, R21916, T98908, AA322859, H83192, AA384127, AA046283, AA055081, R22565, H57499, AA160631, AA173996, AA160536, AA174096, R15833, H82961, AA447282, AA377321, AI219640, T99497, U24152, U49953, AF071884, U51120, U23443, AF082077, AF092132, AR044121, T66458</p>
			<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2847 of SEQ ID NO:254, b is an integer of 15 to 2861, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:254, and where b is greater than or equal to a + 14.</p>	<p>AL047539, AW376875, AI816159, AI880304, AI734029, AI342378, AW410975, AL045220, AI828138, AA325140, AW151122, AA781458, AI204173, AI813770, AI986218, AI365945, AW173188, AI275058, C04008, AI887535, W22881, AI588864, AW272290, AI859169, AA430320, AW054657, AI280882, AI932252, AW197078, AW373553, AI214511, AI567223, T09338, AA464652, AI933379, AI686734, AA938929, AA401005, AI494466, AI689485, W22260, AA464551, AA808281, T09337, AW151508, AA746483, AI476072, AW302553, AA385987, C04877, AA574033, AA612719, AI620626, AW189413, AI686242, AI951483, T29903, AW103357, AA622035, R56392, AA338319, AI520839, C05565, AA551699, AW338825, AW177720, AA558620, AW167455, AW363450, AW007981, AA873069, AI339289, F34729, H41900, H41939, AA659829, AI251921, T28415, AI669886, N41528, AA329834, AI492524, AI350898, AA583577, AA812790, AA514778, T86174, AI457229, N88548, AW338406, AL046341, AA559291, AI357710, AA487745, D25721, H27334, AA558725, AI419550, AI933576, AA341471, AA366971, AW365056, AW382146, AW367544, AI612944, AW192877, AW369010, AI906810,</p>

255	HSLHS76	830582	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 752 of SEQ ID NO:255, b is an integer of 15 to 766, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:255, and where b is greater than or equal to a + 14.</p>	AA364485, AI873754, AI686268, AI567229, AA862202, R85358, D53466, AI282898, AI648378, R31229, AI382495, AA425346, AI452453, AW371251, T86173, D29310, AA722677, AW367556, AA878486, AA487526, H38476, I80845, L20817, L11315, A42378, L57509, AF026259, I68738, L26525, X74979, Z29093, L57508, X99034, U48705, AP000511, AB023050, AC004211, S77585, I80847, S77556, X99030, X99025, X99032, X99031, X99028, X99027, X99033, X57240, X99029, X99026, L57507 AL046964, C04704, C05575, AA188390, AA009416, AA315815, AA179035, W19118, AA192132, AA112020, AA178892, T11706, AA311149, W96503, AW360913, AA372314, T27834, AA161070, AA373237, AA089620, D56181, AA093973, AA112013, AI564441, C03250, AA373819, AA091477, N83198, AA312358, AW157523, AA085056, AA096113, N88726, AA373564, AA303464, AA313428, AA095180, N87249, AA094540, W45262, W76369, AA095614, AW382903, N87211, AA215950, AA216313, AL047817, C05481, C02894, AA216206, AW163322, C05443, AI133597, AA091667, C03109, N88287, N85728, AA094938, AA603604, R57741, AA090688, AA090758, C03258, N86503, AA090433, AA093639, AA216332, C03285, AA096435, AI270298, AA094920, N84777, AA341230, AA179011, AA089671, N86226, AA216073, T19748, N87994, N88527, AI792364, N89280, C03046, T12228, AA090222, H68005, H66300, AL050179, M19714, M19267, M19715, M19713, Z24727, X12369, X64831, M22479, S78854, M34135, M60666, M60667, X66274, M34134, M60668, M60669, M23765, X02412, M34136, M23764, X02411, J00910, M32441, M36337, M36336, X04690, M17914, M17913, M16432, M15044, L02923, M15472, M69142, X16236
256	HKACP86	830586	<p>Preferably excluded from the present invention are one or more</p>	AI567463, AA418473, AA085947, AA928718, AI089939, AA514459, AI660776, AA532818,

257	HASAR52	830685	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1380 of SEQ ID NO:256, b is an integer of 15 to 1394, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:256, and where b is greater than or equal to a + 14.</p>	AA626203, AA491204, AA954880, AA234025, AI372837, AI151350, AA233843, AW014578, AI217766, AA809984, AI660799, AI161145, AA838521, AI818058, AA491007, AA146773, AI347955, AA595155, W01508, AA100116, AA102188, AA922851, AI311580, AA629156, AA045861, AI418234, AA148854, AA148855, AI244580, R99131, AA146772, AA151919, AA320765, H81094, AA424679, AW369634, AW369629, AA053533, AW175674, AI653307, AA085948, AI863666, AI632510, AW175676, AW374868, AA968953, AW175702, AI471376, AI419707, AI806136, T29888, AA382195, AW237879, AW001530, AI859271, AA045862, AW130934, AI683225, AI687775, D00068, AI4571, E01197, M63849, X04371, AR030751, M63850, AC004551, AJ225090, AI4567, M11809, X02661, M11806, M11808, M11805, M11807, AI4573, E01198, X02875, X07179, X08560, M18099, AR040786
			<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1315 of SEQ ID NO:257, b is an integer of 15 to 1329, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:257, and where b is greater than or equal to a + 14.</p>	AI991160, AW194455, AW373879, AW080671, AI478704, AA563940, AI222470, AW369482, AA838626, AI961305, AA876049, AA773070, AI811834, AA622215, AJ003306, AA594638, AA398709, AA132554, AA401349, AI304604, AA884700, AA004908, AA005096, AA626761, AI535903, H66371, W40522, AA913037, AA379602, AA393364, AW189651, AA379305, AA379458, T91965, AI535854, H66323, AI187428, AI002090, AA253411, AA809699, AW173243, AW183147, AA402003, AI905236, AL133643, AB032945, U60416, M55253
258	HAHSF60	830693	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2182 of</p>	U17999, AI310219, AI659630, AW105327, AI925645, AW083894, AW373778, AI282616, AW373786, AL040216, AI951917, AW305314, AA058767, AA085866, AI204582, AI394130, AI282615, AA480121, AW081096, AA427906, AI129583, AI081303, AW166089, AI445651, AI572060,

259	HCQCD01	830710	<p>SEQ ID NO:258, b is an integer of 15 to 2196, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:258, and where b is greater than or equal to a + 14.</p>	<p>AA714654, AA421723, AA313474, AA714639, W94273, AI890861, AA128341, AW069223, AA714678, AI680605, AI400572, AI581101, AA908175, AA053132, AA773907, AI568248, AA971707, AW068941, AA653490, AA427367, AI933131, AI245783, AA635248, AW086162, AA837138, AA029861, AI240077, AA179209, AA856893, AA158985, AA179208, AI475295, AA469263, AI299468, AW205107, AI682547, AI143803, AI393975, R60480, H45116, R27349, W94275, AA158382, AI753055, R55360, AA912498, AA496411, R27348, AA158480, H25419, T95082, AA634378, C04377, AA282669, D58558, AA625545, AA771814, R60244, AA305166, AA325096, R91851, F12862, AA868540, AI127050, AA304571, AA773281, R51832, AA011052, AI202431, R38532, F10464, AA344162, T95179, AA325094, AI767061, AA480509, R27759, N86468, R54227, R89153, T75098, AA282542, AI202570, AA010771, D79633, AA158625, AA358026, AA053518, AI913339, AA364629, H14439, AL040172, AA838536, R27842, AW392413, C03187, AA411427, AA354780, U46239, AA811104, AA314247, AA343415, F13492, AI655372, Z42724, AA090493, U17909, T35726, AA354563, D20904, H45422, AA854092, U17553, AA100997, U17540, W56115, AA574050, AI433284, T27178, L38932, AF139131, AF077301, AR028385, AF077302, L77607</p>
			<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 553 of SEQ ID NO:259, b is an integer of 15 to 567, where both a and b correspond to the positions of</p>	<p>T29561, AW374717, AA040122, R17417, M18728, E01972, AC005204, AC004679, AC004784</p>

260	HUSZD77	830723	<p>nucleotide residues shown in SEQ ID NO:259, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 936 of SEQ ID NO:260, b is an integer of 15 to 950, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:260, and where b is greater than or equal to a + 14.</p>	<p>AW243026, AW376085, AI823573, AI001154, AI040751, AI953364, AI539412, AA813197, AA443277, AA002181, R99800, AI280400, H11236, R99026, AA476689, U75815, AA224588, AB015594, AF093668</p>
261	HCBBA51	830743	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 461 of SEQ ID NO:261, b is an integer of 15 to 475, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:261, and where b is greater than or equal to a + 14.</p>	<p>AW135421, AA035773, AA056334, AA229819, AA314724, C14341, AA401339, W68503, C14299, C14483, C14221, AA308273, C14336, C14385, AW440694, F21255, C13986, F24961, AA328328, AA135681, W68387, AA228680, AW009033, AA747774, C14434, AI223384, AA622053, AA010723, AI202387, AI073496, W07371, AI208241, AA533423, AI223417, AA853968, F24716, AI025140, N69946, AA491891, AA151292, AI150810, AI378443, AA315459, AA635767, N69079, N56655, AA186392, AI707619, C03984, AI708439, AA034221, AA228662, AA151293, AA873167, W42660, W72685, AI718982, N80244, AA969768, F24063, T34897, AW170321, AI016268, AI708120, AA814124, W77791, AA564612, AA722903, AI066527, AA187084, AI087293, AA181331, W80646, AI075691, AA757220, AA922807, AI343724, AA308272, AW182757, AA354607, AA132021, AA594511, AI300747, AW275224, C14504, AA644450, AA903981, W74708, W45185, AA468802, C15788, AA729365, AA973174, AA993667, AA470869, N30323, AA548946, AW275200, F28368, F24779, AA132124,</p>

262	HSDE184	830804	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1230 of SEQ ID NO:262, b is an integer of 15 to 1244, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:262, and where b is greater than</p>	AA974282, AI087145, F36109, AI303012, N98327, AA135594, AA600707, AI129063, AA976458, AA747035, AI378997, AA483684, AA329263, AI735513, AI253570, C14380, F33238, AI341567, AI749684, F26265, AA977143, F33782, AA011171, AA026357, F26564, D51943, W55989, F31642, AI299939, AI337512, C14396, AI126257, AA303645, AA662887, AA373945, F19035, T35109, F27569, AA962592, T30067, AI279207, T34058, AI695702, AA321693, AA366019, W56279, AW372974, F28612, AA033537, C14513, AI188019, AA358641, F27119, F26493, F31065, F31534, W74677, F32176, AI253527, F35052, AI696728, AI748793, AA366883, AA302137, F29971, Z19733, AW021851, AI313106, D58314, Z19731, AA336004, AW062349, AI695164, AI419743, AI910148, AI915282, AI826670, F21953, AW022075, AA317156, W80647, AA639353, AA700688, AI023754, AA062820, F24415, N87141, W95052, AA664589, F32063, F31715, AI749507, AA082419, F19464, AA563674, AI199688, AA886626, AA903495, AI795900, AI766380, AA742691, AI569321, AA778349, AI223418, N85880, H66601, AA659101, AI280567, AA514852, AA983332, W92096, AL041862, AL046356, AL045891, AL042898, AF077045, X16978, AF010323  AI719588, AI799465, AI830002, AA528242, AI469357, AW276402, AI565010, AA209484, AI825926, AI623129, AI767369, AA083180, AA029674, AI208463, AW084876, AA156544, AA774442, AA639381, AI753820, AA064856, AI560799, AW118965, AA056518, AW244067, AA151006, AA157796, AW079268, AI537264, AA524231, AI088720, AI860105, AA150685, AA916719, N25945, H99102, N48273, H00766, AW191026, AA552334, AA169300, AA256576, AA903443, D12105, AI874131, AA127010, H00675,
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		or equal to a + 14.	AA171663, AA344184, R79716, N62945, AI363961, R79715, R76116, AA053666, N63298, H42132, R76171, AI805476, AA126631, AA381347, AL043940, AW393077, AW373228, AI571560, AW393070, AW393129, AW393082, AW393094, AW373225, AW393067, AW373226, AW393075, AW393119, AW393126, AI874071, AW393114, AW393117, AW393106, AW393123, AW393110, AI890219, AW393084, AW393089, AW393127, AW373155, AW393128, AW373264, AW385491, AW373153, AW393068, AW369506, AW393064, AW369479, AW393091, AA256575, AW374154, AW373157, AW393124, AW393072, AW385490, R82537, AW393090, AA053769, AW393120, AI377661, AW393122, AI024212, AA904582, AW393102, AI566991, D61890, AW368667, AA813518, AA287626, AW393118, AA029686, AI670002, AA758700, W00609, AL047675, AL041862, AL040207, AL046356, AI866820, AI802542, AL045891, AL042488, AL119863, AI868931, AI628337, AL043089, AL042745, AI521596, AI270183, AI538980, AI570807, AI355779, AI432666, AI961589, AI698391, AI568138, AI590043, AI439745, AL045500, AI866469, AI571439, AL039390, AI673363, AI539800, AI624293, AI819522, AW080700, AI648567, AI582932, AW083573, AI564749, AI800341, AW050850, AI620075, AL042787, AI890507, AI950729, AI432644, AI884318, AI933992, AI537677, AI671642, AI613038, AI859991, AI872423, AI288305, AI537187, AW051088, AL045626, AI580436, AI538850, AI468872, AL039716, AI499963, AI569583, AI433157, AW026882, AW151136, AI439452, AI539781, AI539771, AI241923, AI610357, AI494201, AI521560, AI500659, AI554821, AI866465, AI572096, AI815232, AI801325,
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	AI500523, AI923989, AI284517, AI500706, AI445237, AI491776, AW151138, AI433976, AI889189, AI500662, AW172723, AI284509, AI274759, AI889168, AI440263, AI866573, AI633493, AI434256, AI890223, AI434242, AI805769, AI888661, AI284513, AI888118, AW023338, AI436429, AI889147, AI345688, AI371228, AI440252, AI866786, AL047092, AI860003, AI610557, AI242736, AI609409, AI887499, AI440239, AI590134, AI491775, AI559957, AI473799, AW008085, AI537273, AI254731, AL046942, AI866780, AI612913, AI540754, AI824576, AI627988, AI627893, AI919593, AB006746, AF098642, I89947, A77033, A77035, AL117435, AL137533, AL050393, AR034821, AL137480, AL137550, I48978, Y09972, AL122049, AR038854, AL110280, Y10080, AL122110, X82434, AL137271, Z82022, AF008439, AL133049, AB007812, AR020905, X79812, Z97214, A21103, AF067790, S36676, AL137558, AL122106, AL133067, AL049382, AF061795, AF151685, Y10655, AL137557, AF067728, AL080148, S61953, I48979, A65341, AL133080, X80340, AL110221, S68736, AF104032, AL137463, AL122050, A58524, AJ000937, I33392, AL117460, X84990, AF139986, AL050138, E02221, AF111849, S75997, A58523, AL137459, AL133072, AR011880, AL133558, AL050024, AL080159, AR029490, A08916, AL023657, AL080140, A52563, AF032666, AF057300, AF057299, A08910, A08909, AF026124, AL117457, A08913, U35846, AL133560, AR013797, A18777, A08908, AF158248, U49434, AF061981, AL137488, A08912, A03736, X72889, Y11254, AL117416, AF100781, AF087943, X70685, AF183393, I09499, AL050155, E12747, AJ005690, AF090934, AF177401, AL080126, AF078844, A65340, AL049283, AL133640, AF111851, AF159615, AL133075, AL050149,



263	HFIYB72	830816		<p>AF125948, I66342, AL133113, AL117648, I89931, AL117585, E01314, AL122100, Y14314, AL122093, U42766, AF113019, I49625, AJ238278, AL080234, AF090900, S78214, X83508, AF026816, AL137539, AF126247, Y16645, AF125949, AF146568, U80742, I03321, E06743, AL049452, AL137479, AF017437, AL137478, X62580, AF118090, AL080154, AL133081, AF000301, AL133077, AF030513, AL050366, AL050277, AF113690, AF115392, AL133665, A93350, AL110225, AL137658, AF185576, I00734, S78453, AL110196, AL137529, AL137538, E00617, E00717, E00778, AL133619, AL137548, AL122121, AL133557, AF113677, AF090943, E07108, AL117587, AL133016, AL050092, AL137292, AL080124, E07361, AF100931, AL049300, Z37987, U78525, AF106657, AJ012755, Z35309, X81464, AF017152, AF113694, AL049430, AF106697, AL050116, AL096744, AF061573, A15345, I89934, I89944, U49908, AJ003118, L04849, AR038969, AF097996, E05822, D89079, U58996, AF113691, AF090901, AF102578, A18788, AF118064, AF091084, I26207, A08907, AL049938, AL117583, AF079763, AF090903, A45787, AF137367, AF106862, AL110218, U88966, AF118094, AF132676, I42402, AF061836, AL133010, AF081195, AL137476, X53587, A08911, AL137526, AL117578, AL117440, AF090896, AL110222, AL137665, AL122123, AF111112, U67958, AL049314, E02349, AF031147, A07647, A08915, AA886326</p> <p>H05642, AA425526, AA149693, AW085716, R99973, Z19801, AA251202, AA229351, AL137349, AC007566, AC004539, A74647</p>
				<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1118 of SEQ ID NO:263, b is an integer of 15 to 1132, where both a and b</p>

264	HMTAE63	830829	correspond to the positions of nucleotide residues shown in SEQ ID NO:263, and where b is greater than or equal to a + 14.  Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 485 of SEQ ID NO:264, b is an integer of 15 to 499, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:264, and where b is greater than or equal to a + 14.	AI939916, D63224, AW407639, AW176021, AW027307, AI814810, AI739298, AI192787, AW004949, AA649240, AI922342, AI306508, AI692396, AA970466, AI458587, AI286059, AA367812, AI221716, AW366594, AI702490, H12163, R35607, R21083
265	HWBEJ14	830859	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 721 of SEQ ID NO:265, b is an integer of 15 to 735, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:265, and where b is greater than or equal to a + 14.	AA160635, AL120395, AA307958, R77168, AW404547, AA128522, AW404437, AA223749, AA317034, C18276, AA330991, AA299384, AA381373, AI189784, AA341697, AA160634, R09362, AA362020, AW378279, AW406265, W24688, AA379334, AA316279, T92853, AA382078, AA318459, AA381663, AA405270, AA316596, AA478352, AW175619, AI189607, T59832, AA381765, AW405436, AW378287, AA376090, AA363718, AA375376, R73743, AW378267, AW387731, H94791, AW387336, AW370372, AW378281, AW378259, AA528578, AA570485, AI079183, AA662199, AW370333, AW370355, AI374711, AW370308, AW370322, AW387740, AA383912, AA662159, AW370323, AA630800, R37885, W01112, AA911098, AI248496, AA173272, H61317, AI360250, AI814445, AI033504, AA436228, AA577551, N93055, AI200240, AI304326, AA291643, AI216115, T82436, AI924336, AA771918, AI337564, AI445044, R80999, J03909, AF097362, AC007192
266	HVAAB82	830879	Preferably excluded from the	AA533630, AI473697, AI377206, AA908795,

267	HPWBX45	830901	<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 837 of SEQ ID NO:266, b is an integer of 15 to 851, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:266, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1243 of SEQ ID NO:267, b is an integer of 15 to 1257, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:267, and where b is greater than or equal to a + 14.</p>	<p>AI148470, AA236012, AI457262, AA527388, AA993815, AI287718, AI373278, AI370775, AI348505, AA164552, R48904, W37451, AI865138, AA350356, AA768457, F02513, AA235044, AI468590, AA448830, H29311, AI192390, N90567, AI766033, C02065, Z39583, R44816, H13822, AA358286, AA164551, AA128266, AW380587, H13821, AW269142, AF003924, T62074, T62130, T67747, T67857, AA746229, AA962194, AA987868, AA994828, AI000188, AI015557</p> <p>AA135970</p>
268	HODGW05	831019	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1071 of SEQ ID NO:268, b is an integer of 15 to 1085, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:268, and where b is greater than or equal to a + 14.</p>	<p>AI114651, AI207440, AI132961, AI207682, AI174834, AA741297, AL037798, AI133466, AW157292, AW157509, AW157759, AA651721, AI452526, AW385669, AL048670, AW440411, AW440420, AI745445, AI510709, AW014941, AI207552, AA088187, AI083814, AW360786, AW360820, AW360777, AW163097, AL038802, AI815802, AI095824, AW003648, AI492193, AA135632, AW242026, AI937890, AW360783, AA551141, AI267658, AA278804, AI570233, AA897500, AI356383, AA777969, AL037375, AA628054, AI951818, AI888377, AA493742, AW275189, AI762602, AI207734, H75980, AW173448,</p>

AI133690, AI968543, AW157025, AW131345, AI560091, AW369790, AW026879, AI636794, AW439580, AW162995, AA902388, AI055994, AW162102, AI815773, AW074216, AI907595, AI735366, AA908309, AI909708, AW369605, AI174846, F28124, AI064691, AW391713, H20215, AW338446, AI439016, AA442415, AI281876, AI908465, AW371227, AI907969, AI908472, AA088252, AL037828, AW380759, AI671075, AI815390, AA657677, AW161708, AA570782, AL036115, AI908677, AI908644, AI288025, AI282929, AI253372, AA657463, H21151, AA923046, AW369681, AI906307, AI523888, AI253436, AI287789, AI906319, R74305, AA837128, AI337896, AL037031, D56190, AL038801, M85486, AI207671, AI418229, AI131083, AW392787, H20917, AI267484, AI589443, AA489128, AI216967, H03983, W56409, AA974055, AW043660, AI744947, AW274771, AW362921, AI091864, R06021, AI888875, N74495, AI205124, AW262373, AL035805, AW362828, AI202284, AI631257, AW175604, AW173740, AI524704, AA492593, AA203575, AA707898, AA588178, AA976831, AI282246, AI005305, AW026149, AI879040, T48808, AW360822, AW081095, AI581540, H21108, AW072602, T31335, AA514815, T30541, AI909087, H88540, AI905048, AA484362, T35933, AA483258, AW163348, R16640, H88588, AA988499, AW385963, AI630264, AW076087, AA987311, T35170, AI906899, R01442, AW080305, R11512, AW372792, T05411, AA026758, AW276849, AW363348, C02045, AA652476, AA502198, AA886007, AA903597, AA972586, AA380809, AI290811, AW360784, AI934074, AW382010, AW163700, AA902853, AA284010, AA639286, W80468, AA837609, AA826319, AA001792, AI582383, AW389230, AI907609, AA367531, AI252799, AW382002,

269	HNTCW73	831057	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1301 of SEQ ID NO:269, b is an integer of 15 to 1315, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:269, and where b is greater than or equal to a + 14.</p>	AA468454, AW391736, T32608, AW360808, AA658510, AI361513, AI433144, AA640251, N55790, AI610336, AI758860, AW392874, AA829062, AI279827, AA285126, AW131958, AW088099, AW162392, AW365219, AW392938, AW148369, AW128863, AI286315, AA513880, AA513902, AW392971, AA610424, AI269413, N66825, AA501597, AA135633, AA483251, AA903377, AL038739, N88776, AI267237, AI902986, H83967, AF203815, D87666, A86999, AF187554, AC005972, AA614076, AA659247, AA876594, AA978221, N28221, N56441
270	HASAB03	831099	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2945 of SEQ ID NO:270, b is an integer of 15 to 2959, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:270, and where b is greater than or equal to a + 14.</p>	AL043277, AW192332, AI909668, AW373765, AW366446, AW385861, AI279085, AI755112, AW360806, AW006775, AL048587, AI754864, AA594966, AA037283, AI694017, AL035871, AA827914, AI754435, AA522900, AI768385, AI921210, AI978938, AI769550, AA890380, W38716, AI814604, AI114623, AA843903, AW151745, AI264616, AI962888, AA393857, AI625323, AW067772, AW367305, AI755271, AI024220, AW385825, AW129755, AI961412, AW338924, N71915, AW371923, AW007415, AW371953, AW152563, AI086861, AL048588, AW275879, AI921129, AI963523, AW440316, AI671698, AA525231,

AA669805, AI745060, AI089253, AA100517, AW023254, AI683039, AI131267, AA857664, C05243, AI860438, AA993640, AW188422, AI591351, AI535661, AA664422, AI685134, AA255837, AI559307, AA148057, AI583984, AI015513, AW029476, AI571485, AI891065, AW069758, AI886050, AI620311, AI372868, AA984009, AI613271, AI144003, AW054945, AW151853, AA553912, AI638114, AI090092, AW150370, AW069075, AI051892, AI358457, AI401216, AI961284, AI308793, AA393858, AI972037, AI086960, AI813751, AI445420, AI982684, AI570230, AA714493, AW339124, AW338501, C05993, AI608834, AI913777, AI084028, AA610339, AA116055, AI086674, AA666001, AA156943, W51898, AA192463, AA563900, AI041919, AA922728, AA191631, AA070027, W38380, AI022909, W52474, AA804931, AW316759, AA977110, AA112091, AA846166, AA039259, AI129734, AI890871, AA173867, AW371919, AI537403, AI814816, AA630553, AW008474, AI086565, AI953864, AI283841, AI127701, AI373721, AI184688, N32273, AL047242, AA602651, AA576828, AA037749, AW439199, AI567267, AI066397, W60142, AW044360, AI249245, AI676203, AI348683, AI274903, AI628320, AW338491, AW304090, AI913169, AI281485, AI961594, AA261995, AA665045, AA136751, AA165022, AI567535, AI872495, AA088692, AW008098, AI752141, AA031546, AW068047, AI561069, AW073508, R69200, AI564752, AL079829, W42582, AI559197, AA135909, AI356976, AA112739, AA768641, AI926538, W23962, AI804568, AI263134, AI262471, N90725, W39486, AI926714, AA136413, AA088829, AI802577, AA642453, AA100245, AI753745, R69678, N90423, AA614772, AA296186, AW021979, AI752835, W67173, AA610361,				
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271	HMWBR7 0	831117	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2011 of SEQ ID NO:271, b is an integer of</p>	AA493599, AI750225, AI872509, AW152650, AI682890, AI752140, AA524125, AW385815, AA330032, W44824, AW072596, AA372686, AW380736, AW198129, AA305538, AA985349, AA182563, AA776487, AA159808, AA877646, AA890174, W53040, AW363248, AA192538, AA099577, W38525, AI078691, AA669445, AA186553, AI241108, AI682790, AA988567, W03004, AA374180, AW304321, AA947835, AW363274, AW243883, AA181803, AA194658, X07979, U27351, U10865, Y00769, X15202, U12309, M14049, AF086249, U91517, U33879, U37029, S77516, U47283, U28252, M34189, U33882, M84237, T58120, T90056, T90158, T94290, T94639, R69590, R76031, H65424, H65425, N40465, N47619, N48504, N66482, N67212, N67243, N67881, N72302, N92538, N94512, W06930, W20370, W42594, W48665, N90075, AA025009, AA024962, AA029382, AA029726, AA031500, AA044145, AA044261, AA065061, AA082386, AA083544, AA083757, AA100236, AA130509, AA130510, AA132145, AA136308, AA136528, AA146853, AA146852, AA148049, AA182776, AA186858, AA423999, AA228337, AA228348, AA506755, AA506420, AA513968, AA514542, AA551485, AA618333, AA729997, AA738153, AA806122, AA876216, AA877173, AA894385, AA988275, N84005, N84600, N84939, N85553, N86141, N88049, N89450, N89451, C02877, C02980, C03631, C05332, AA090838, AA089614, AA091652, AA093130, AA093851 AW364502, AW175925, AI629024, AW371202, AW377222, AA557142, AW302163, AI541363, AA173981, AA847195, AI418480, AI015673, AI357621, AA311487, AW088608, N49020, AI374592, AI245029, AI580659, AA173625, AA627866, M61973, AI370154, R80585, M85322, AW028914, R80586, AA767503, T34668, AA643885, D25882, AW118462,
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272	HMSHS44	831163	<p>15 to 2025, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:271, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 838 of SEQ ID NO:272, b is an integer of 15 to 852, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:272, and where b is greater than or equal to a + 14.</p>	<p>AA090877, AL050105, AF146277</p> <p>AI769751, AI890125, AI797291, AA877133, AA534692, AA600344, AI300465, AI376117, AI376622, AA056501, AI791654, AI821488, AI655898, AI821513, AA535746, T88845, AA056387, AW118107, AA533380, AI791633, AI961311, D29031, AA348459, AI872896, AI926428, T25160, AA320105, N92813, AA526424, H67064, AA188940, AA706202, H10889, AC002563, U52111, Z73988, AL050347, AP001049, AC007450, U61224, AC007240, AC003030, U60970, U57833, AF184614, AC004883, AC005058, AC004022, AC004801, AL049709, AC004821, AC007201, AC005796, AC006271, AL049794, AC010205, AC005409, AC006450, AL121825, AP000690, AC006023, AC005253, AL022326, AL022313, AL049779, AC005231, AC009542, AC005065, AF017104, AC003684, AC005220, AC005082, AC004789, AC000031, AL031984, AC005736, AL035683, AF111168, AL121603, AL096677, L44140, AC002112, AF112441, AL035495, Z85987, AC005660, AC005070, AL096816, AC002477, AC009330, AP000493, AC005666, AL096773, AC002481, AC004876, AC004955, AC004491, AC005874, AF134471, Z69652, AL031255, AP000313, AP000050, AC006449, AC005529, AC007656, AC005839, AC012085</p> <p>AL133812, AA057014, AL133807, AA059289, AA375309, M34057, M55431, AF022889, E03391, E03392, L48925, AL133244</p>
273	HMEIJ62	831210	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 557 of</p>	



274	HWHHW7 9	831212	SEQ ID NO:273, b is an integer of 15 to 571, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:273, and where b is greater than or equal to a + 14.  Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 696 of SEQ ID NO:274, b is an integer of 15 to 710, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:274, and where b is greater than or equal to a + 14.	AA151754, AW452006, AW176113, AI560397, AI478632, AR014373, AF037335, AF051882, AR025464, AR060382, AR014372, AR014371, AR014381
275	HLVGG06	831234	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 581 of SEQ ID NO:275, b is an integer of 15 to 595, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:275, and where b is greater than or equal to a + 14.	AI827618, AA524529, AW006669, AI364518, AI810908, AI870394, AI932255, AI184165, AI829428, AI198374, AI499187, AA426304, AA782427, AA483399, AW188288, AA621334, AA426305, AI357307, AA535284, AI734918, AA527060, R50343, AA728756, AA233176, AI198776, R43242, AI498962, AI536662, N99079, AI869160, AA233253, AA406234, AI824656, AA406506, AI633635, AA570590, AI081306, AA85118, AA431721, AW103534, AI560447, R27570, AI919448, AI168823, AW072891, AI312964, AI307518, AI312268, AI307581, AI334883, AI377612, AI335158, AI379371, AI340544, AI583900, AI371557, AI311171, AI313105, AI289556, AI287734, AI284894, AI275279, AI224733, AI271056, AI289342, AW301347, AI334952, AW301852, AI349203, AI246815, AI223589, AI287755, AI305468, AI284882, AI289381,

276	HMEKY46	831239	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1158 of SEQ ID NO:276, b is an integer of 15 to 1172, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:276, and where b is greater than or equal to a + 14.</p>	<p>AI275304, AI349973, AI289540, AI224304, AI270800, AW302069, AI306106, AI312158, AI307884, AI307055, AW304563, AI305531, AI340455, AI289698, AI308405, AI340774, AI265747, AI345465, AI318504, AA652611, AI334506, AA771828, AA565904, R27668, N44104, AL133622, AC022517</p> <p>AI189170, AI140760, AI082054, AI056396, AI806807, AI582184, AA633205, AW025195, AW275805, AW189136, AA625324, AL036912, AI222729, AI452692, AA552219, AI590588, AA583468, AA854329, AI539505, AA552105, AI089275, AA653511, AI144455, AA936283, AA610340, AA937207, AA002237, AA988860, AW263737, AI131254, AI077899, AI969240, AA534694, W44513, AI084736, AI991229, AA622094, W60528, AI798548, AI032319, AA857029, N36884, AI827095, AW029620, W47626, AW264733, H27046, AA127706, AI971593, AW015948, AI656611, AA973131, AI474331, AA324936, AA912436, AW082992, AI685757, AW261981, AA610405, N46156, AI675487, AI306698, R09550, AA883359, AA148736, W92729, AI886717, R09663, AA631431, AI640181, AA916173, AA911544, AA878663, N27966, AA305833, AI608651, AA127753, T88994, AA002076, W80465, AI244504, AA586688, W47627, AA148737, AI377097, AI620793, AW337660, AI074163, AI095400, AA640164, AI190720, AI131546, H30335, AI222679, AA722231, AA128572, AI093461, W21407, R26714, AA506117, AA313017, AI027221, AI908464, H30272, AW374920, W44514, AI202426, AA128275, AI215590, R26937, AI908463, AI383283, AA419078, AI925207, AW170302, AA329758, AA622089, AA423819, W92753, T68487, AW028728, AA974873, N93575, AA149497, T68420, W80574, AI459069, AA099290, AI951076, AW264825, AA358247, AA371034, AI222917,</p>
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				AA701110, W56215, H28228, AI564572, N59591, AA099291, AI003903, T88923, AL039390, AL045166, AI890907, AL046681, AL046137, AL042551, AI255048, AI251945, AI252520, AI251411, AI620284, AI366900, AI539260, AI249936, W20435, AI273179, AI582910, AL045979, AA954134, AW172723, AI570807, AA928539, AI360195, AI432644, AI433157, AW151136, AI866691, AI539771, AI537677, AI494201, AI500659, AI815232, AI801325, AI500523, AW151132, AI582932, AI923989, AI284517, AI500706, AI431307, AI445237, AI491776, AW151138, AI440238, AI583578, AI889189, AI521560, AI500662, AI446536, AI284509, AI431316, AI889168, AI927233, AI866573, AI633493, AI434256, AI805769, AI888661, AI284513, AI888118, AI889147, AI440252, AW172745, AI274759, AI436429, AI371228, AI926593, AI866786, AI610557, AI554821, AI611743, AI889148, AI355126, AI648567, AI690946, AI561170, AI432666, AI285417, AI804505, AI866465, AI538850, AI887775, AI590043, AI872423, AW151970, AI289791, AI539800, AI582912, AI860003, AI538885, AI440263, AW130362, AI860027, AI866469, AI434242, AI500714, AI285439, AI859991, AI355779, AI623736, AI581033, AI491710, AI475806, D79206, DI3292, X67016, AL021578, AL137538, AF185614, I89947, AL133084, A93350, AL117416, AL133619, AF038847, AL049423, AF141289, AL133049, AC004213, A65340, U30290, AF044221, AF013249, I48978, U57352, AF004162, Y14634, Y10655, AF100931, AF044323, AL133070, A08910, A08909, A32826, A32827, A77033, A77035, AL080159, AL117435, AL137550, X66417, I29004, AL133067, X82434, A86558, AL137271, AF124728, I09499,

				U73682, AL110280, AR050959, AL050024, E12579, A03736, M19658, AF026816, A18777, AL133053, AL050138, AR029580, E01573, E02319, AL137459, A08913, AF061795, AF151685, A27171, X62773, Z97214, AL133112, AR038854, AL137463, AL137254, AF113677, Y14314, X99226, L24896, AL122049, AF097996, AF076633, E12580, AF090886, A10352, AL050149, I66342, AF104032, A58524, S78214, A58523, AF069506, AF090903, AF039138, AF039137, AL133568, AL137294, AL050393, AJ005690, AF002985, X66862, AF087943, AL137530, Z82022, I46765, AL110221, S83440, AR034821, AL133031, X57961, AL133080, AL122106, AF026124, AL137533, U80742, E02221, AL049347, I89931, AF114170, AF017437, AL117587, X83544, AF183393, U88966, I49625, AF013214, A08908, Y10823, A65341, E03671, I33392, AL049382, AF031147, A08912, S77771, AL133016, U35846, A08911, AF055917, A30330, A30331, A08907, L04849, L04852, A07588, AL137560, E01314, E01614, E13364, AF043642, I00734, AL133062, AL049283, U58996, E00617, E00717, E00778, AF199027, AL137521, S76508, AF102578, I48979, X97332, AF091084, AL049938, D44497, Z13966, AL117460, I17544, Y09972, AL049466, AL049452, J05277, AR020905, AF090934, AL050172, AL050280, U37359, L13297, AL122110, AF113019, AL137283, AF119336, S63521, X79812, AL049426, AL122050, AL133645, AF017790, AL137281, AF047443, I73428, AL096744, E06743, I68732, AL133665, AL137539, AF215669, Y13350, AL133640, AF162782, AF126488, AL122101, I32738, X65873, AL137548, AL137480, X72889, AR011880, AL137488, X66871, AF017152, AF067728, AF200464, AF079763, AF177401, S68736, AL137658, AC004383, Y07905, X93495, I89934, AF000167, AL137627, A92311, AR068753, Y10080, AL137478, AF131821,

277	HLTER57	831268	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 766 of SEQ ID NO:277, b is an integer of 15 to 780, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:277, and where b is greater than or equal to a + 14.</p>	<p>AB007812, AL133075, X06146, AF026008, AF125948, AL133077, AF195092, AL133015, AL133608, AF090901, AF008439, AF182215, E07361, A15345, I80062, U92992</p> <p>H08565, AA446090, H05864, R21086, W05808, R19798, AI262167, AJ236581</p>
278	HAPOA59	831307	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2361 of SEQ ID NO:278, b is an integer of 15 to 2375, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:278, and where b is greater than or equal to a + 14.</p>	<p>AI828094, AA314161, AA444370, AI986034, AI768472, AW129954, AA039651, AA444378, AA025822, AA039602, AI125818, AA432284, AI376215, AA931215, AA992138, AI352529, AI500209, AI361672, AA314888, AI005214, AI675983, AA070015, H96476, AA977410, T78443, AI086891, AA515679, AI249434, AA447097, AI274337, AA428629, AA833996, AI681656, AA082507, AA227125, R37636, AW250600, AI687052, AI358677, H96957, T91051, AW248442, T60627, R39054, R55955, AA069905, AA342067, R41926, T78356, T78507, AW247353, T85913, AI589713, AA102550, AA661692, AA342066, AW275380, AA102201, AW273693, AA384787, T87442, T83773, T81646</p>
279	HAGDZ30	831313	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a</p>	<p>AI971257, AI810067, AI922196, AW195330, AI207838, AI346751, AW073373, AI891081, AI672451, AI573282, AI870222, AI381534, AI685727, AI627992, AW360985, AI784604, AI950829, AI885957, AI925643, AI962991,</p>

	is any integer between 1 to 2447 of SEQ ID NO:279, b is an integer of 15 to 2461, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:279, and where b is greater than or equal to a + 14.	AI017462, AI925005, AI634947, AI697419, AW316704, AA442759, AI248184, AI801820, AA477579, AI982678, AI972075, AI453821, AI701954, AW276098, AI460284, AA878863, AI570388, AI800205, AA922678, AI005625, AA576407, AI469437, AI261318, AA947992, AI799500, AI624670, AI610837, AI985773, AA746085, AW022137, AA583463, AA566089, AA507952, AA429721, N23773, AI537788, AI373585, AA837997, AI074096, AA496403, N67917, AA887178, AA985597, AI954543, AI278945, AI356974, AW243755, AW022260, AW022208, AW020000, AI348684, AA617991, AI630329, AI537593, H30122, AA777812, AA844283, AI244382, N66497, AA864382, AA757380, N23726, AI857753, AI479529, D57403, HI2271, D57829, N68137, AA631437, AA937471, D57395, H63166, AW118330, H27631, R79476, D58166, W95944, AW021706, D58096, AW021936, AA618186, D57778, N23730, D57449, T27640, D57757, D57518, D57468, AI678887, D58277, AA485546, AA370325, AA370328, R31511, H71003, D57539, AI473546, AA493243, D56571, D58108, D56610, AA428720, D58060, AA280404, C18106, D56935, AA470397, D57742, D57851, R33906, D58148, D56648, R12840, D56986, D58184, D56616, D56702, AI559806, D57023, AI274663, R84834, C03207, R33921, D57041, R74449, AA379680, D56928, D57514, D57990, AA362156, AI858769, D56521, D57591, N52416, N73801, D56925, D56746, D57750, D56749, D56718, R13148, D57601, AI568829, D56874, D56992, D56987, D45546, D57323, D57464, D56637, D58078, AA018712, R44148, D56849, R74350, D57377, AA579200, C17030, F01435, D56757, D56803, AI280320, AA366924, H95636, D57268, AI167153, T97774, D58151, T09381, D56640, R79209, R32943, D57772,
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280	HKLRB18	831386	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2506 of SEQ ID NO:280, b is an integer of 15 to 2520, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:280, and where b is greater than or equal to a + 14.</p>	<p>AL048386, AA446539, AW027333, AA446357, AW027211, AI123421, AW117569, AI095892, AL049150, AA179402, AA179403, AA687603, AA195216, AA122080, AI379659, AA232623, AI224508, AI367033, AA122081, AA688008, AI127981, N98419, AA449853, AI151588, AA195322, AW451411, W30707, AW152674, AI685218, AA232570, AA036798, AA449815, N34511, AI373125, C04227, W31245, T60077, C16396, AA663730, AI085125, D62863, AW451576, N47745, H79889, AA088603, W25518, D62090, D61783, W19311, AA343562, AA029086, N91811, C16383, D63027, D62827, T90437, D63070, AI685013, T90343, AA149451, N88273, AA376102, AA090694, T60112, H77318, AA249480, D62310, H79796, AA343561, H77317,</p>

281	HKGDF04	831390	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1434 of SEQ ID NO:281, b is an integer of 15 to 1448, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:281, and where b is greater than or equal to a + 14.</p>	D62620, D62253, D62342, AI381727, C04681, AA336504, AA548790, AA095105, AA029085, AA248394, AI375876, AI962881, AW005401, AW192651, AW157520, AA573848, AA773003, AI200002, AI360197, AA489763, AI819605, AA485793, AA626415, AW163318, AA487345, AA516109, AI334418, AI336290, W44353, AI333850, AI278013, AI190652, AA487171, AA648788, D55857, AA428909, AA487535, AA491479, AI343767, AA988779, AI094917, AI370921, AA574063, AA456307, AA491478, AI276934, AA099092, AI624969, AA213720, AA216580, AA564545, N25973, AI298986, AA099015, AA226943, AA487324, AW071946, AI318107, AI624951, AI563934, AI469018, AI086775, AI361095, AA218542, AI302640, AI378961, N28794, AI080730, H13340, AA505107, AA418898, W45706, AA837985, AI378911, AA313589, AW078972, W74523, AA564596, AI351658, AI032017, AA487536, AI183843, AA973883, AI751152, AI680507, W79862, AA456705, R94685, AA604182, AI150992, AA411839, AA769351, AA831679, AA485083, AA834509, AI264483, AI874117, AA617946, W24010, AW191038, AA504968, AI262813, AI077658, AI244942, R45288, N62205, N36603, R94686, R85229, AA307241, AA216590, AA074933, AA593080, AI273811, AA418897, AA485195, AA226935, T53890, AI184380, AA033566, H52125, AA491307, N41703, AA218541, H71328, H17537, AA318002, AA330733, H71376, T16712, AA167137, AA862989, D53829, AA129588, N76503, T81546, N63213, AA363516, AI742754, R21066, AA377768, AA889482, AA100911, AA227051, AA227045, R46246, AA564530, AA300777, AI872734, AA371799, AI193134, N30891, AA100315, C20972, AI751151, H30523, AI000171, AA996021, AA627402, AA506087, AI751326, R94643, AA643349, AA525370, N88026,
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282	HKAJZ24	831426			<p>R72654, T81973, AA219135, AA723218, AA299440, AA873602, W37206, H52010, AA862394, H30288, AA704651, T27586, AA195596, AA034468, AA090940, AA194961, AA296622, AA809830, AA340098, R85230, AA258953, AI269884, R72732, AA219518, AI277909, W52126, H28095, AA974789, AA213719, AA471326, R20470, AI751325, AA112912, T54037, AA828191, AA339713, R94642, J04794, U46064, D10854, AF112485, AF060820, AF036682, AF112482, AF036681, AF036683, AF036680, AF112484</p> <p>AA373809, AF154107, AJ245539, AF049344</p>
283	HWLJE49	831453		<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 813 of SEQ ID NO:282, b is an integer of 15 to 827, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:282, and where b is greater than or equal to a + 14.</p>	<p>AI887549, AI076353, AA806402, AI682046, AI188649, AI144531, AI149488, AL048205, AW277103, AI612881, AI761676, AI299022, AI270732, AA308274, AW005575, AI302970, AI748792, AI832372, AI342462, AW304345, AI917533, AA308142, AI270352, AA315030, AA314014, AI720893, AA181838, AI370898, AA314940, AI735477, AA316359, AA582161, AA313264, AA316330, AW338556, AW054848, AW270408, AA316482, AL048204, AA128653, AA622771, AA708600, AA316966, AA552413, AA316871, F20821, AA316230, AA059344, AA608518, AA778388, F22738, AI735055, W42494, AA314690, AA186781, N57485, AA316119, AA151389, AA188023,</p>

	AA315181, AI571338, AA308375, AA501758, AW084031, AI686866, AW151692, AI215740, AA315858, AI720163, AA622853, AI911854, AI493715, AA186572, AI566835, AI832383, AA314578, AI366934, AA972504, AA128640, AA525827, AA128773, AA085915, AI348494, AI365423, AA315026, AA603482, AA100923, AA316175, AI131330, AI750155, AW152644, AI805579, AA308360, AA314770, AW273529, AA433942, AA316292, AI189776, AI828326, AA622714, AA731831, AI635850, AW269457, N90290, AI832624, AA496683, AA152205, AA315287, AW271995, AA157114, AI927800, AA186785, AA625916, AA508592, AA285319, AI859361, AA100249, AA187300, AI081408, AA873184, AW268506, AA102595, AA148426, AI079753, AI610890, AA315876, AW080650, AA148425, AI200434, F26435, AA128843, AI052465, AA082690, AA081048, AA430038, AA583272, AI831094, AW297172, AA082642, AI832611, AA593739, AA188009, AW083676, AA504053, AA768590, T28002, AI573293, AA554103, AA879086, AA582331, AA303876, F31804, AA157398, AA448385, N47631, AA515914, AI749485, AA502855, AA661629, AA430247, AA374002, AA525806, W32501, AI936707, N98968, AW019905, AA554114, AI886460, H43821, AA191451, AW264981, N69844, AA295733, W37171, AW020640, AA804819, AW022481, AA074400, AA448388, AA317837, AA101159, AW264650, AI832279, N69829, AA316794, AA309060, F36681, AA281995, AI832592, AA315201, AI185444, AW188862, AW276985, N98592, AA315641, AA299617, AA307588, AA302405, AA147961, AA303860, T59320, AI904281, AW264976, AI873743, AA303991, D56856, AW270689, AA188014, AA328253, AA318077, AA148024, AA551489, AA280593, AA602048,

				AA299787, AA318098, AA345331, AI185476, AA129252, AA040884, AA349074, AI832892, T57654, AA320182, AA863388, AA315397, AA384594, AI824703, AA302465, T67495, AL036308, D59050, AA327552, AA665430, AA157202, AA040885, AI301784, AA858247, AA962387, AA366642, AA516232, AW190774, AA569072, AW270486, AA001276, AA357392, F21204, AA070176, AA313067, AA095884, M14300, M18981, J02763, X66449, M37761, X52278, D10885, U31867, AJ132717, U76365, U04815, X05699, AB031064, I89947, I48979, AF090900, AF090903, AF113019, AL110221, AL049314, AF118070, AF111851, A08916, AL050149, I89931, AL122050, S68736, S78214, AL133640, I48978, U42766, AF017152, AF090934, AF113677, AF113699, AL133075, AL050277, AF113694, AL110196, AL050116, A08913, AL133557, AL133016, AL049452, AF106862, AL050393, AL122123, Y11254, AJ242859, AL117457, L31396, L31397, AF090901, AF113689, Y11587, AR059958, AL117460, X84990, AF090943, AL050108, Y16645, AF078844, AF113690, AF118064, AL080060, AF090896, AJ000937, AF113676, AL137527, AF091084, A93016, AF158248, AL137550, AF113691, AL080124, AL049938, AF113013, AL133565, AF104032, AB019565, AL122121, AL049466, AF125949, AL050146, AL133606, AL122093, E03348, AL133093, AL080137, AL133560, AL137557, AL096744, X82434, AF146568, AL137283, E07361, AL133080, AF079765, AL137459, AF125948, X63574, AL110225, AL117394, AF017437, AL049300, E02349, I49625, AF177401, AL050138, U91329, A65341, E07108, AR011880, A08910, A77033, A77035, AF061943, AL050024, A08912, AL049382, AL133113, AL049464, AL117583, AF183393, AJ238278, AF097996, AL117585, AF067728, I03321, AL117435, AL049430, A08909,
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284	HJPAUJ37	831465	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 599 of SEQ ID NO:284, b is an integer of 15 to 613, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:284, and where b is greater than or equal to a + 14.</p>	<p>AF118094, A58524, A58523, U00763, X70685, Z82022, AL122098, AL137271, X65873, U35846, X96540, I33392, A03736, AL137648, AL137538, A12297, AL122110, AL137463, AL137523, AF000145, U72620, X72889, AL049283, U80742, AL133072, AF087943, AL080159, AL080127, X98834, AL133568, I09360, X93495, AC006336, S61953, A93350, AF061981, AF026124, U67958, I42402, AL050172, AL110197, AJ012755, A08911, Y09972, AC007390, I66342, AL137521, AF111112, AC002467, E08263, E08264, AL117432, E15569, AL137526, AC004690, AL122049, AL137560, I17767, AR013797, I26207, AF095901, Z72491, AF026816, E05822, AF119337, AR000496, U39656, Z37987, AC006112, A07647, AF185576, AC004200, AF153205, U02567, AR038969, Y14314, AF057300, AF057299, AL110280, I00734, Y07905, M30514, E00617, E00717, E00778, AL122118, AL133104, AL133067, U96683, AL133077, AF081197, U49908, X57961, AR038854, AF079763, AL133014, AL035067, AL137479, AL137476, AF100931, AF111849, E12747, AL122111</p> <p>AA195680, AL119569, AW170124, D80038, D59275, D59467, C14331, D80227, C14389, D80195, D51799, D80164, D59502, D80269, D58283, C15076, D59859, D80022, D80166, D81030, D51423, D59619, D80210, D80391, D80240, D80253, D80043, D59787, D80378, D80212, D50979, D80193, D80196, D80188, D80219, D59927, D57483, AA305578, D80366, C14429, D59610, D50995, AA305409, D59889, D80024, D80045, D80241, D51060, T03269, D51022, AW178893, AW179328, AA195735, C75259, AW177440, C14014, AA514188, AW378532, D80134, D81026, AW178775, D80251, AW369651, D80248, D59695, D52291, AW178762, D51250, F13647, C05695, D80522, AW352158, D58253, D81111, AW177501, AI910186, AW177511, AA514186, D80133, AW360811,</p>
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285	HHGCU20	831558	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 519 of SEQ ID NO:285, b is an integer of 15 to 533, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:285, and where b is greater than or equal to a + 14.</p>	<p>U87250, AR066488, X93549, AR016514, AR060138, A45456, A26615, AR052274, Y09669, A43192, A43190, AR038669, AR066490, AR066487, I14842, A30438, I18367, D88507, AR054175, D50010, Y17187, A63261, X64588, I79511, AR008277, AR008281, AR008408, AR062872, A70867, AF135125, AR016691, AR016690, U46128, D13509, A64136, A68321, AR060133, U87247, AB033111, U79457, Z82022, AF123263, AR032065, AR060382, X93535, AR008382</p>
286	HHEDO80	831586	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2057 of SEQ ID NO:286, b is an integer of 15 to 2071, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:286, and where b is greater than or equal to a + 14.</p>	<p>AA142858, AA314199, AW007218, AI500207, F22165, AI583241, AA630401, AI563924, AA975000, AA056029, AI241216, W57917, AA448763, AW051788, AI734878, AA708925, AA448666, AI015250, W57916, AI871374, F36633, AA933045, AA304316, AA469104, AA452900, AA372713, F33453, AA868287, AA728846, AW148299, F27183, AA662867, AA090265, F32178, AI884732, H60157, AI239551, AA665372, AI138861, AA372977, AI138860, F17890, AA296006, AI688888, AA321626, AW072540, AI033079, AI810256, AA699948, AA954271, AI032505, W73860, AI598252, AL041736, AA056047, AA211887, AA659257, F23448, AF086234</p> <p>AA576724, AI951349, AW276552, AI799029, AI057643, AI568537, AA873296, AI554257, AW087661, AI769757, AI142833, AI127845, W28742, AA780723, AI638174, AI912689, AI658631, AW086195, AI167140, AI206353, AA259106, AA970724, W56511, AA579551, AA188109, AW291685, W56792, AA572670, W27270, AI086331, AA187981, AA744362, AA908223, N72247, AA148569, AI907261, AA836315, AA070705, AI991698, AI051485, AW087493, AI608827, AI973021, AA679026, H82465, W00535, AA469314, AI818538, AI084100, AW242896, AI825014, AA988475, R90908, R90907, C14842, W26147, AA070171, AA480554, AA345393, AW119010,</p>

287	HFPCU40	831664	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1952 of SEQ ID NO:287, b is an integer of 15 to 1966, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:287, and where b is greater than or equal to a + 14.</p>	AI700169, AW391446, T70182, AA972234, AA150194, AW361167, C00131, AF179867, AF181985, AF161373 AW177931, AW177992, AW178009, AW178005, AW177951, AW177936, AW177995, AW177944, AW178048, AW178041, AA629950, AW411051, AL044016, AW389833, AW178010, AW177957, AA313828, AW402582, AW178054, AW249093, AW178051, AW387276, AA316196, AA248372, AW365209, AW389842, AW366059, AA315172, AL036393, W22056, AW178057, AW177930, AW408385, W28494, H10496, AW178152, AW020594, AW177948, AW239147, W28198, AA214700, AW177935, AA317849, AI095942, H13039, AA333291, AW374620, AL039058, AW389844, AW403352, W93157, R35205, AA332154, H86174, AA355654, AA312906, AW368020, AW365144, AI375999, AA309928, AA186436, F08488, AA306961, AI833050, AA337701, W25833, AA090436, AA227246, D58615, AA333816, AW391917, R21449, AA336724, AA089667, AA349155, T03891, AA151442, AA373046, AW376986, T10989, AW366433, AA355970, AW376880, AW270181, AW376885, AA630406, AL043392, AW366437, R84255, AI695839, AA670156, AA089530, AL043393, AW367419, AW381606, N83917, AA838204, AW367460, AW131317, AA248210, AI572805, W38847, AI807613, AI306439, AA425191, AA779317, AW341512, AA248507, N43782, N73217, H87431, F07829, AA188774, AA356713, T11035, AA618166, W24589, AA452668, AA877770, AW239547, AA476256, AA432304, R57428, AW071739, AA218791, AI479802, T29322, AI962926, AI798718, AW440962, AI560836, AW265593, AA779688, AA776281, AI002315, AA037670, AA676215, AI342739, AA702021, N71253, W85697, R58183, AW367513, AI927436, AI983754, AI983744, AW375978, AA093661, AA226170, N89002, AA654291, AW264121, AA658889, AA946753, AI620728, AA377112, C21247, T95354, AA460053,
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288	HFKHD75	831687	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 855 of SEQ ID NO:288, b is an integer of 15 to 869, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:288, and where b is greater than or equal to a + 14.</p>	<p>W01599, AW028226, AA877791, S74678, X72727, AJ003024, D17711, E05038, E05039, L29769, L31961, AC005611, U37146, AR020747</p> <p>AI749850, AI554799, AA600829, AI951254, AA976473, AW172576, AI380416, AA744708, AI423039, AW337528, AI275427, AI278487, AI375358, AW388269, AI097658, N31054, AI827750, AA430556, AI970461, AA292161, AI074843, AI925082, R55046, AA464953, N48001, AA456814, AI378059, AA426224, AI887084, AI040277, T49489, R05976, AA292061, AI439286, T28789, N21648, AW129965, AI356124, AI950599, AA747361, W45727, AW388332, AA303438, AI350957, AA625062, AA360274, AA436267, AI250286, T24476, W44375, N51208, AA304386, AA346730, X76538, AF038633, M36411, AF088036, S68430, S68419, S68420, S68417, S68422, X76228, AL035458</p> <p>AA366787, H95748, AA348593, AA383923, AW380725</p>
289	HFIHX78	831703	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1091 of SEQ ID NO:289, b is an integer of 15 to 1105, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:289, and where b is greater than or equal to a + 14.</p>	
290	HETIK68	831753	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1968 of SEQ ID NO:290, b is an integer of</p>	<p>AI343269, AI522020, AI982924, AW015045, AW338033, AI766246, AI522310, AI797000, AI675580, AI420342, AI693386, AI800024, AI038428, AI687558, AI697010, AW016374, AW013962, AI348530, AW300181, AI026086, AW264243, AA595361, AA975312, AA632562, W15339, AW264340, AW166209, W39430, AA173430, AI270122,</p>



291	HETBE76		15 to 1982, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:290, and where b is greater than or equal to a + 14.	R69647, AA378018, AA988648, AA337255, AA173325, AA578298, D79753, AA854488, AW391415, AI521805, AL080078
	831757		Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2315 of SEQ ID NO:291, b is an integer of 15 to 2329, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:291, and where b is greater than or equal to a + 14.	AI948513, AI521842, AA861608, AA776729, AA873727, AA121732, AI767604, AI478638, AL120570, AI804513, AI809848, AI201912, AA424780, AA424912, AA928716, AI829579, AI127051, AA722575, AI951252, AI871780, AI738557, AA831723, AI589519, AI081106, AI659119, AI580790, AI762200, AA495898, AA933399, AI262851, N92454, AI017186, AW009228, AI986286, AI356876, R84784, AI367115, AA938671, AI656123, AI076614, AA425006, AI632518, AI244294, AW274173, AI311920, AI278760, AW451998, AA747686, AI086329, AI371182, AI21753, AA923398, AI079714, AW075545, AW451372, AI963974, AI698056, AW237762, H67632, N94534, AI239768, AA766879, AW005601, AW025755, AI917272, AA912765, AI651534, N45128, AA827193, AI096514, AI208452, AI537524, AW105081, AI652940, AI079379, AA960757, AA514274, AA127511, AW242371, AI825015, AI659303, AI623094, R64666, W47415, AA514214, AA316649, AI864198, AI738944, AA505293, AI291664, AI334291, AW243120, AA483626, H85019, AI972892, W30808, AI263240, AI801914, AA564775, AA969679, AI968461, AW020691, AI635568, AI633216, AI913368, D81257, AA909613, D81807, AW104483, R61801, R61078, AA365034, AI498647, AI685876, AA361272, T35972, AA635701, AA151431, AA069660, AA780155, AI611030, Z45934, AI371535, R64667, AA337758, R22587, D11574, D11588, AA019311, AA047379, AW328736, AA309039, AI867996, AI355448, AW008000, AI817592, AI10736, D12413,

292	HTXOJ32	831795	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2410 of SEQ ID NO:292, b is an integer of 15 to 2424, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:292, and where b is greater than or equal to a + 14.</p>	AA151547, AI383311, Z41551, R71994, R83483, AA091995, AA127608, AI561277, R21939, AA630062, D67015, L38951, AC004941, AC004543, D45836, AC007277  AA192516, AW372699, AW361629, AW361621, AW361620, AW372702, AI926736, AW372703, AW057708, AA722810, AA922840, AA471025, AA857014, AW007645, AA936150, AA192445, AI458792, AI356221, AI913433, AA937586, AI679232, AW073422, AI074142, AW167774, AI453180, AA027267, AI572020, AI679876, AA584369, AI380657, AI435177, AA658242, R72389, AI907912, AA311435, AA027268, AA031594, T17253, AA687196, AA937691, AI829199, W52226, AA507314, AW083528, AA031762, AA100275, AW193144, T33867, AI620696, T33324, T17185, AI926994, AI802227, H14512, AA042902, T10307, H14511, AI187756, F11772, AI536694, T10306, AI913782, AA088594, AW196728, AW190217, AI571683, AA354015, T17254, AW009741, AA631319, AA604589, AA551439, AI932537, AA506901, AA654790, H50898, T10358, F28812, AA053251, AI866301, AI570087, AA532846, AA937692, AA099802, AI674386, T10359, T30903, AI872591, AW137528, AI446289, H52737, T33868, Z41051, T54570, F09427, T33325, T31489, AA290790, Z42387, AA284982, AA464401, Z45340, T54531, F01898, AA053640, AA455519, AI199423, AI811000, AA042970, T12291, AW372707, AA248135, AA081064, F37185, AW372710, AL035541  AL044584, AL138248, D80585, AL044585, AA393394, AA314281, H14891, AI672787, T27240, AW068307, AA398732, Z45847, F08323, T30804, W74005, AA322586, AA345329, AI358870, Z42244, W38434, AI096496, AI159851, AI380153, W39773, AA623010, AA679523, AI859011, R36507, AI049868, AB002357, D26077
293	HE9RY54	831796	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2146 of SEQ ID NO:293, b is an integer of</p>	

294	HE6FT69	831880	<p>15 to 2160, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:293, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1243 of SEQ ID NO:294, b is an integer of 15 to 1257, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:294, and where b is greater than or equal to a + 14.</p>	<p>AI627719, AI826337, AI913298, AA699666, AA454977, AI825805, AI379649, AW005373, AI955641, AI367634, AI291537, AI659915, AA070635, AI677774, AI264352, AI887760, AI086065, AI333336, AI560197, AA406386, AI857738, AA236418, AA495959, AA625605, AI972154, AA424977, AA935797, AI168710, AA470765, AW131182, N20988, AI273300, AA160768, AA454976, H98003, AA745064, AI301060, AI342746, N31500, H25929, AI334298, AA907224, AI379938, AI969710, AI079943, AI866267, H97409, AA236419, AI083917, AI631334, AA662723, AI963568, R70434, AA487990, AI333786, AI025991, AI866937, AA524428, AA570574, AI384106, AI357917, T89945, H27635, AA976544, AI859227, N33359, AA506478, AI986277, AI536570, AA886569, AI872689, AI453471, AI920796, H85511, AA224948, AA528058, AA366910, AA916373, T63999, AI381673, AI674289, N31501, AI810445, AA487879, AA444084, T89310, AA887172, H25953, AA327082, AI701276, AW369732, AA587438, AI380737, AA774267, AI868865, T64077, AA160767, AA406499, D45747</p>
295	HDTBQ51	831899	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1103 of SEQ ID NO:295, b is an integer of 15 to 1117, where both a and b correspond to the positions of</p>	<p>AI692892, AW444533, AA768390, AA806956, AI739449, AI275191, AA159048, AI633235, AW205678, AI872096, AF070552, U04709</p>

296	HDTAB33	831910	nucleotide residues shown in SEQ ID NO:295, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 454 of SEQ ID NO:296, b is an integer of 15 to 468, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:296, and where b is greater than or equal to a + 14.	AW298044, AI261259, AW295460, AI348190, AI659095, AI205524, AI867931
297	HLHGG05	831931	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 450 of SEQ ID NO:297, b is an integer of 15 to 464, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:297, and where b is greater than or equal to a + 14.	AI679679, AW137087, AW136632, AW206781, AW205573, AI754694, AW130004, AI679105, AW139508, AW150016, AI888670, AW057842, N30203, AA916365, AW151517, N71022, AW118009, R82627, N58950, T78608, AW438959, AI590913, R19380, T86923, R81518, H90128, T91814, R87682, R88833, R22580, T82210, AW087385, AI703398, AA219769, AI768901, AI245891, AI472294, AI380473, AA434119, AA808148, AA394131, AW025959, AI630809, AI139579, AI341162, AW002942, AA769217, AI073899, AA009743, AA778299, AA252824, AA492530, AI760740, AI917492, AA425341, AI023177, AI266192, AI038172, AA635944, AI524323, AI685900, AA678951, AI659184, AI206031, AW001102, AI971077, W67544, AA535554, W72549, AA640705, AA722564, R21930, AL045500, AI499463, AW303152, AI475371, AI469532, AW162071, AI436456, AI064830, AL121270, AI580190, AI608667, AI433976, AI433157, AL121365, AL040243, AL119748, AW071349, AL047042, AI440426, AI868831,

			AL047763, AW117882, AI500077, AI863014, AI349256, AL119049, AI567351, AL119791, AI275175, AI702406, AL135661, AI568870, AI687728, AA585422, AW268253, AI934036, AI620284, AW301409, AW089572, AI873731, AI969601, AI696846, AI815383, AI687376, AL036146, AI800433, AI538716, AI439087, AI349772, AL036802, AW103371, AI312152, AI285735, AI349937, AI679724, AW238730, AI686926, AI497733, AI349933, AL046849, AI282655, AL120736, AI349004, AI906328, AI343112, AL036396, AW074993, AI521012, AI349645, AI536685, AI659534, AI758437, AL036980, AW071417, AI440239, AI540832, AI609592, AW169653, AI583316, AI800453, AI281773, AI690751, AI500553, AI590128, AI866608, AW195957, AI818683, AI250293, AI673256, AI678302, AI687415, AI281779, AI597918, AW087445, AI613017, AI702433, AL038605, AI567632, AI920968, AI499393, AW274192, AI635461, AL120854, AI919058, AI340582, AL048871, AI699857, AI889203, AW068845, AI345735, AI564719, AI445432, AI625079, AI609331, AI500659, AA640779, AA613907, AI857296, AI498579, AL036759, AW148320, AI349614, AI366549, AI631107, AI909666, AI207510, AW080838, AI348897, AL036274, AI753683, AI249257, AI539771, AW235035, AI802542, AI597750, AI907070, AI499131, AI349598, AI282903, AI697137, AL038778, AW166645, AI340519, AL040169, AI612913, AW074869, AI633419, AI636456, AI690835, AI432229, AI568854, AI446606, AI800411, AL045903, AI921379, AI680113, AA572758, AI307466, AI568855, AI366991, AI866002, AW301300, AI343059, AI687375,

	AI969567, AL038779, AI492540, AI909662, AW167776, AI671679, AI635942, AI610307, AL047041, AI269696, AW302965, AI224992, AI874109, AI952114, X86018, I48979, AL117457, AL133016, AF113694, AF090900, AF090901, S68736, AF090934, AL133640, S78214, L31396, L31397, Y11587, AF118064, AF118070, AF104032, AL050393, AF078844, AL080060, AF090943, AJ242859, AF125949, AF113691, I89947, AL110221, AF090903, AL110196, AF106862, AL117460, AL137527, AF113690, A93016, AF113013, AF113676, AL049452, AL050146, AL133606, AL049938, AL133075, AR059958, U42766, A08916, AF113689, I89931, AL050116, AF090896, AL050149, AL122050, AL122093, AL050108, X84990, AB019565, AF113677, AL049314, AL133557, AL049466, AF113699, AL096744, A08913, AF097996, AL050277, AF017152, AF113019, AL133080, Y16645, AL080137, AL080124, AF146568, AL137283, AL133093, AL122123, AR011880, AL137459, I48978, E07361, Y11254, AL122121, E03348, AL133565, AF079765, AF158248, U91329, X63574, AL049430, AL137557, AF111851, AJ000937, AL050138, AF091084, AF125948, AL117394, X82434, AF017437, AL110225, AF177401, AL137550, I49625, AL049382, AL133560, U00763, AL117583, AL117585, E07108, AL122110, AJ238278, AL049300, E02349, X70685, A65341, AL117435, A08910, S61953, AL049464, AF067728, A08912, A03736, AF183393, AF118094, AL050024, AC006371, AC007390, AC002464, AL133113, U72620, Z82022, E05822, AJ012755, AL137648, AL137538, A08909, A58524, A58523, I33392, AL122098, AF091512, A77033, A77035, X65873, AL137271, A12297, AC004686, U35846, AL035067, AL122049, AC004093, AC006336, AL137463, X96540, AL049283, AC002467, U95739, X72889, I03321, AF087943, AL080127,

298	HDPTH11	831942	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2616 of SEQ ID NO:298, b is an integer of 15 to 2630, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:298, and where b is greater than or equal to a + 14.</p>	<p>AF061943, AL022147, I66342, AL050172, AL110197, AL133072, U80742, AL096776, AC007392, U68387, AC004383, AC007172, AL078630, I09360, AC006039, AC005992, X93495, AL023657, AC007298, U67958, AL078602, I17767, X98834, AC009233, Y09972, AL137526, I42402, E08263, E08264, AL031346, AR013797, AL080159, AC005886, Z98036, AF026124, L13297, AF111112, AL133077, AL137523, AL137521, A93350, AL133067</p> <p>AI524826, AI628083, AA456561, AI554053, AI066556, AI478798, AI801476, AI807830, AA913477, AI424225, AA227589, AA625584, AI963182, AA576069, AI252762, AA070604, AA428503, AA235962, AI539101, AA419520, AA721024, AI357722, AA314319, AA310761, AA235961, AA88687, AA479915, AW300423, AA304968, AA912243, AI910898, AI521757, AI658537, AI000288, AI244242, AA304963, AI583529, AI950641, AI005178, AI254210, AA806032, H26906, AI688879, AA832031, AA081596, AA362983, R33476, AI382821, AA614062, R34012, AA652453, AA343918, AA355362, AA074345, AC004987, AC004884, AB017707, AJ388553, AJ012491</p> <p>AI668930, AI810530, AA310513, AA046953, AW104534, C06094, AA830127, AW134897, D31302, AA334151, R20723, AA333976, AA334725, AA263003, AA744752</p>
299	HDPLB15	831956	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1408 of SEQ ID NO:299, b is an integer of 15 to 1422, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:299, and where b is greater than or equal to a + 14.</p>	
300	HDAAQ89	832009	<p>Preferably excluded from the</p>	AA833806, AA307557, AA583078

301	HDFUB44	832010	present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 539 of SEQ ID NO:300, b is an integer of 15 to 553, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:300, and where b is greater than or equal to a + 14.	AW338359, AL021808, AF033199	
302	HGCOL40	832044	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 450 of SEQ ID NO:301, b is an integer of 15 to 464, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:301, and where b is greater than or equal to a + 14.	AI563913, AA911092, AW082122, AI290978, AW192658, AW080802, AW273044, AW273119, AW316974, AW087861, AA453922, AI740502, N57987, AW389665, AA564567, AA075127, AA780582, AA564564, AI023728, AA166711, AA862962, AW360773, AW239348, AA947598, AA151677, AA167069, AI334299, AA228145, AW360771, AI804065, AI567811, AI376069, AA435625, AA453416, R44983, AI093923, AA865356, AI160152, T56668, AI311660, AI865242, AI285104, AA074236, AI339696, AI086712, R52997, AI351650, AI168284, AA582151, AI084993, D83877, AA620392, AI346150, AA088708, H09885, AA582681, AI075185, AW023981,	



303	HCRN173	832093	<p>AW362083, AA393301, AA121803, AI932640, AI084014, AA194182, AA041290, AW084458, AA773186, AA307214, AA872667, AW242061, T18873, AW360768, AA312621, T32483, N62197, AA075212, T15792, N76494, AA181608, AW378782, AA307379, H09799, T31958, AI126262, AW005425, AA350891, AI093346, AI126827, AI283346, AI358318, AW150695, AA216255, W78217, AA188478, AA527989, AI222552, AI474179, AA984408, AA613841, AI000072, R52998, AI933271, AA494525, AA314232, AA832393, AA430221, AW075218, AI499678, AW025048, AA634173, H06543, AA937359, T34192, AI264236, F13785, AA342668, T31974, AI933757, AW379080, AW198083, AA221037, AA369266, R20197, H24790, AA228036, AA521289, H06485, AW248001, AA194067, AA112359, AI093922, AI918381, AA221025, W02915, AW380169, R09616, T34869, AA247336, AI919378, AI630436, AA846987, AA336990, AA353782, AA601549, AA126288, AA557397, AW246236, AA075847, AA041323, AA926862, AI832938, AW376333, AA088793, AA866164, AA301226, AA151757, N71468, AA776490, AI525653, AI541056, AI525669, AI541048, D82348, D89976, U37436, D89514</p>	<p>1 / 21</p>
			<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 644 of SEQ ID NO:303, b is an integer of 15 to 658, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:303, and where b is greater than or equal to a + 14.</p>	

304	HODEY51	832138	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 657 of SEQ ID NO:304, b is an integer of 15 to 671, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:304, and where b is greater than or equal to a + 14.</p>	<p>F11209, AB002330</p>
305	HFIHN81	832148	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1666 of SEQ ID NO:305, b is an integer of 15 to 1680, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:305, and where b is greater than or equal to a + 14.</p>	<p>AL042631, AI742759, AA411200, AA843236, AI332935, AW088593, AI753548, AA430755, AI126216, AA883907, AI589054, AW129680, AI421403, AA809767, AI096900, AI090252, AI375660, AA975282, AW025613, AI696884, AA418825, AI276185, AI041886, AW023916, AA280663, AI184595, AI273487, AA418922, AA678806, AA599671, AI269876, AL121498, AA651902, AI422122, AW129568, AI610287, AW118017, AA074831, N67973, N80394, AA502148, AA938484, AA810852, AA467867, R62706, R78736, AA885009, H62109, AA832174, AA630340, AW06053, AA748880, AI334827, AA721278, AI355096, AI690078, C02375, T78202, AI865532, AI082521, D56859, Z24846, AA016055, T23983, AA256793, AA365109, D81573, AA911263, D80672, AI800354, AA364241, D81746, T31963, AW391245, T30091, AI537402, R63666, AA256472, N51659, AA360186, R37864, AA385537, H71558, AI886344, W33108, AI536011, R78737, W33107, AI537695, AA075097, AI535800, AA281049, AI929282, C15432, N50394, AA347987, AI916692, AI205878, H85870, AL119010, T24806, N83575, AA383937, AL042800, AF103804, U85258</p>

306	HCQA140	832187	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 768 of SEQ ID NO:306, b is an integer of 15 to 782, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:306, and where b is greater than or equal to a + 14.</p>	<p>AI458850, AW006118, AA935994, AA742431, AI830252, AA005342, AI076581, AI568411, AW068285, AA022765, AI362704, AI364382, AI032348, AA004292, AA022666, AI952553, AI819614, AW083306, AW392542, AI932463, AA743048, AW015161, AW269672, T95631, AW392527, AI673546, AI818204, AI804505, AI370383, AW129264, AI475331, AW262767, AI653402, AI446515, AI254814, AA831948, AW084097, AW168503, AW169604, AI918677, AW162189, AW411465, AI819545, AI473471, AA830821, AW026557, AI114703, AI298321, AI684116, AA640570, AI583533, AW196720, AW088903, AI633125, AI345415, AI696714, AA731026, AI568967, AI828239, AA070777, AI830024, AI620864, AI866469, AL079997, R06685, AI744268, AI540606, AI500061, AW297364, AI524179, N75779, AI241923, T69241, AW088697, AW238688, AI624529, AI521005, AI539800, AI469516, AI636507, AI963172, AI886181, AI684305, AI699020, AI678446, AI658566, AI887381, AI698391, AI538564, AI915291, AI870190, AW152182, AI288149, AI689614, AI619820, R20540, AI434731, AI690813, AI889189, AI473536, AW248417, AA587590, AW193911, AI804842, AI627360, AL120921, AW163834, AI884318, AI673140, AI432969, AI287252, AI470674, AI638644, AI370623, AI637584, AI635955, AI479292, AW083149, AI701097, AI500714, AI499570, AI697378, AI886321, AI521560, AW089844, AA732156, AI267185, AI873638, AI682798, AI926143, AI924713, AI811631, AI474137, AL046562, AI624239, AI433611, AW022856, AW020095, AI872423, AI590043, AW087812, AI345745, AW021178, AI524654, AA761557, AI865320, AI859464, AI758694, AL039276,</p>
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<p>AW191916, AI803816, AI500688, AI095003, AI362347, AI584130, AI678681, AI800648, AA805964, AI926147, AI879377, AW004606, AI863002, AW051088, AI523973, AI564432, AI621341, AI921092, AI612723, AI445829, AW080920, AI284013, AW188525, AW263569, AI801325, AI582932, AL043355, AA937566, N27632, AI421662, AW075382, AI699823, AL135545, AI857296, AW151451, AW083572, AI309306, AI927233, AI783997, AI962900, AI866419, AA808175, AI633419, AI619748, AI282967, AI499104, H89138, AW118496, AI620056, AI635634, AL048499, W45039, AI349482, AI434656, AI274655, AI583032, AI355779, AW025279, N21402, AI570056, AI868680, AI634345, AW194014, AI457369, AI678357, AI686589, AI688854, AI345347, AI648494, AI096771, AA641818, AI932366, W74529, AL046595, R10067, AI624475, AL042628, AW081383, AW103928, AI251221, AI627893, AI886355, AI701975, AW044386, AI909641, AI648699, AI285439, AI582966, T49776, AL039858, AI802244, AI422080, AI581033, AI500706, AI568060, AI803786, AI435641, AI628325, AW083775, D63485, AB026995, AL133010, AI5345, AF167995, AF047716, AF199027, D44497, AF137367, AL137548, U36585, AL137476, X53587, AF067728, AF082324, AL080159, I89947, AF013214, E03348, E03349, A08913, AF090903, U49434, AL080148, D83032, AR050959, AF106697, A08912, A08911, AF016271, S69510, U35846, AF124435, AR038854, E12747, A07588, AL117578, S76508, E01314, AF169154, X57084, U92992, A76337, AF118092, AF199509, A08910, A08909, AF215669, AL080146, AF076633, AL137711, AF081571, A08907, AF067790, A08908, AF115410, AR022283, A70386, X98066, X82434, X79812, A65341, AL117460, E12580, AL122100, I48978,</p>	
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				AL117443, AF032666, AF080068, AR029490, AL133062, AF008439, AR068466, AF115392, AL133084, AF119336, AL117587, E12806, X75295, S73498, AL137284, S77771, I32738, E02221, Z97214, Y16645, AL133070, AL137538, AB007812, E00984, I04527, A45787, A52563, AL137292, AL080074, A18777, AF126488, AF110417, AL133014, AF185576, Y00093, AL080118, Y11435, AF119337, S83456, AJ131955, A65340, AL133557, AF026124, S83440, AF002672, AF116573, AF055917, AL137550, AR053103, AJ001838, AL133067, AF145233, E02349, AF183393, AF159615, AL110158, A58545, I18358, I34395, AL137488, S79832, AJ012582, AF022363, AL137716, AR066486, AF130342, AF113691, AF100931, AR000496, U39656, AF007142, AF039202, AF017790, U30290, AL049466, A58524, A58523, AC006197, S75997, AF089818, AL137560, Z13966, E03168, A93350, AF150103, AL023657, S82852, U80742, AF040723, AL137480, AL049452, AL133665, AF109906, I22272, AL080060, AF105427, AL137657, AF017437, S36676, U89906, AF038847, A77033, A77035, AL049382, AF036941, AL137271, AL050172, X63162, Z82022, AL122093, AF060866, X84990, I17544, AL080162, M27260, AF090900, AF118558, AF058921, U37359, U73682, AL050155, AF106657, AL137641, AL133049, AL137268, AF061573, S65585, AF161418, AL137537, L19437, A86558, X66871, E15324, U95114, U62966, AF044323, AJ010277, AL080150, X99971, AL133565, AF108357, AF061943, A32826, A30330, A32827, A30331, X97332, A21103, AF000167, AL136884, X73361, AF113677, X66862, Y18678, AL050024, AL122104, AR009628, AR012379, AF113699, AL117416, AL080139, Y09972, AL050116, AF158248, AF061981, AL110228, A27171, S53987, X67813, AL117432, AL080163, Z30970, U49908, AF107018, U72620

307	HWACZ95	832343	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1777 of SEQ ID NO:307, b is an integer of 15 to 1791, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:307, and where b is greater than or equal to a + 14.</p>	<p>AA179447, R72130, T77704, W23071, AA827875, AA857360, AA910941, AA179304, AA629581, AI354330, AI720403</p>
308	HBAGU45	832346	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 709 of SEQ ID NO:308, b is an integer of 15 to 723, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:308, and where b is greater than or equal to a + 14.</p>	<p>AI949414, AI278614, AA460720, AI336968, AI739400, AI811128, AI097226, AA718947, N34664, AI804845, AI636623, AW104988, AW241732, AA92479, R12446, AA132220, AI122599, T88928, H18859, D62933, F09312, AA992756, R37113, AA224337, F10014, Z39783, R42462, H15692, F03945, R60837, AA683151, AL120153, AL041818</p>
309	HRGSB33	832411	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 519 of SEQ ID NO:309, b is an integer of 15 to 533, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:309, and where b is greater than or equal to a + 14.</p>	<p>AA263071, AA333989, AW239301, AA333117, T99607, AA374381, AA852737, AL049776, X16318, U51920, X16319, X86373</p>

310	HAJBC35	832464	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 749 of SEQ ID NO:310, b is an integer of 15 to 763, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:310, and where b is greater than or equal to a + 14.</p>	AA744752, AI276287, AI684428, AI524234, AI335035, AW014704, AI911443, AA972102, AA99975, H17550, AI126670, AI367512, AI147163, AI286003, AW016017, AI991439, AA626033, AI539156, AA565542, AI094253, AA863400, C16408, R46187, D63102
311	H2LAJ2I	832575	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 3117 of SEQ ID NO:311, b is an integer of 15 to 3131, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:311, and where b is greater than or equal to a + 14.</p>	AL036933, AL036939, AL048073, AL048603, AW204115, AI290846, AA452377, AI279167, AI823494, AI479242, AI770056, AA514388, AA444134, AI923914, N34161, AI828431, N57560, AW089930, AI671327, AI887720, AW130495, AI342487, AA261988, W68047, AA131177, AI915802, AA507542, AI554224, AI920961, AA622542, AA165260, AI370837, W30889, AI913112, AI522150, AA884234, AA165192, AI580801, W68189, AI377969, AI368020, AW362717, AI692648, AW362730, AI400130, AI089124, AA495964, AW104569, AA458832, AI752021, AA010988, AI624199, AI312654, AI141998, AA424972, AW264917, AI393118, AI420320, AA936071, W52729, W59982, AI473947, N29014, AI094215, AI702929, AI241045, AA313962, AA165259, AA434438, AA946621, AI185344, AI208160, AI478473, AA443955, AI830750, D61715, AA452407, N20642, N25562, AA505193, AA459024, N31768, N72111, AW352390, N24838, AW362714, AA936069, R67670, AA310396, AA307991, AA312665, C00143, AA045041, R71154, AI679453, AA115599, AL048074, AI032265, AA164550, AA279863, AI287799, AA164549, AA641464, AA465698, AA165191, AA376659,

	AI023021, AA689232, AA689233, AW195471, AW016753, W00338, AA832321, AA641236, R55862, R62843, AA319946, R71651, AA807169, AI752022, AI695309, AA878091, AA019459, R62797, W00374, R54149, AA708792, N84375, R28543, F05636, C18301, D58209, AI611756, D56782, T29634, D57016, R28684, AA904023, AW005949, AA115134, AA608767, T24590, AW362657, AA362995, AW352352, AA044336, AI739583, R55782, AA043870, AW176677, AA434210, H30570, AW379939, N86645, AA804910, T27409, AA621210, AW362648, AW079572, AI491710, AI802542, AW163834, AI270183, AI824576, AI698391, N75771, AA045040, AI765469, AI540458, AI553645, AI700441, AI610446, AW051059, AI758924, AA806619, AI564259, AI469505, AI345416, AI345612, AI814087, AL046466, AI345415, AI538980, AW080746, AI590227, AI590043, AI673363, AW166870, AI612913, AA470523, AI570807, AI638798, AI889189, AW051088, AI884318, AW162194, AI624293, AI670015, AI621341, AI613038, AI818353, AI783997, AW087199, AI589428, H89138, AI245008, AI452560, AI288285, AI478123, AL079963, AI812015, AI537677, AI819202, AI888208, AL037582, AL037602, AI923989, AW006032, AW004886, AI866090, F27788, AW129659, AI581362, AI241923, AI701890, AI571439, AI654276, AI567769, AW170725, AW026882, AI648458, AI923370, AI625464, AI678688, AI866770, AI433157, AI702073, AI567582, AI636588, AI537837, AI570966, U02680, I28763, U82324, AC005412, Z82022, Z97214, I89947, I48978, AF102578, L04849, AF177401, A77033, A77035, I09499, A65341, AL137533, AL122110, X66862, AF111851, AB010386, AF032666, AJ005690, AL050172, X84990, I48979, AF118070, AF067790,



	AL15345, AL137271, AL117435, S36676, AL137560, AL122098, AL110221, S68736, AF137367, X72889, AL133637, AL080148, AF104032, AL122100, A65340, AF069506, X65873, I00734, AR038854, X79812, AL049283, AF031147, E00617, E00717, E00778, AF061981, AF106657, A08913, AL137574, AL110222, AL133016, A08912, M92439, AL137480, AL137665, AB016226, AF113019, AF090934, AL080159, I33392, AF111849, I17544, AL137529, AL137292, AR020905, AL137711, E02221, E01314, AF159615, A08916, Z37987, AL117440, AR034821, AF113694, AL137478, AF061795, AF151685, X82434, AL117416, AF047716, I32738, AF090901, AL133619, A08910, A58524, A58523, A21103, AF114170, A08909, Y11254, AL122050, AF087943, AL133640, AJ238278, AL050116, AL137558, AL137488, U42766, AF008439, AL050393, U95114, A08908, E06743, AL137459, AF026124, AL050149, AF044323, AF002672, AF067728, AL117587, AL137550, AF017790, AL133665, AF057300, AF057299, AL050366, AF028823, X80340, AF185576, U80742, S79832, AL137521, AF022363, AR011880, I89931, AF118094, AL050024, A76335, AF153205, AL117460, AF106697, AF004162, X63574, AF081197, AF081195, AL133560, I49625, X62580, X63162, AF205861, AL080126, U35846, S76508, AL110218, AL137539, AL080124, AF111112, A18777, AF100781, AF017437, I26207, AL049430, AR029490, AL133557, AL133072, AF078844, AF113690, AF094480, AB007812, AJ010277, Y16645, AF183393, AF139986, AB019242, AJ012755, X83508, S61953, A18788, AF065135, AF107847, AF176651, AF090886, AJ003118, A12297, AL050138, X93495, A03736, AF182215, AL137479, AL133049, E03348, E03349, AF090900, AF210052, AL110296, AF090903, D83032, AL049324, AL137530, A93350, M27260, AL023657, U00686, S77771,

312	H2LAB53	832593	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 926 of SEQ ID NO:312, b is an integer of 15 to 940, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:312, and where b is greater than or equal to a + 14.</p>	<p>AF040751, AL050170, AL122093, AL117392, I89934, X06146, AF126247, AF162270, E04233, AF132676, AF061836, AF118092, X52128, U87620, U72621, AL137537, E12747, A08911, AL137276, U75932, AF113689, AF113677, AF112208, Y11587, D16301, AL137547, AL050155, Y07905, AF000145, AL137476, I89944, AL137463, AL050277, AF119337, L04852, L19437, AL049339, U92068, AL117457, AL096720, A52563, AL133113, E01614, E13364, U88966</p> <p>T48152, AA307989, AL134865, I35495, U19769, I81218, U30872, AR048216</p>
313	H2CBJ07	832597	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 836 of SEQ ID NO:313, b is an integer of 15 to 850, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:313, and where b is greater than or equal to a + 14.</p>	<p>AA481204, AA307574, AT910976, AL049631</p>
314	H2CBT12	834890	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a</p>	<p>AI708881, AW131514, AW410922, AI458776, AI460287, AA770684, AW419089, AA629426, AW338612, AA410957, AA102560, AW269470,</p>

			<p>nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 944 of SEQ ID NO:314, b is an integer of 15 to 958, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:314, and where b is greater than or equal to a + 14.</p>	AA947036, AI928965, AA582728, AA877842, AI826342, AA203284, AI073742, AW129647, AW131385, AI859955, AI673062, AA147789, AA081655, AA431626, AI813999, AA609956, AA310329, AW129705, AA211563, AA664239, AI188931, AI557115, AW410372, AA054592, AI200871, AW304100, AA527878, AA433866, AI880560, AI034210, AW406147, AA714085, AI432567, AI749909, AA081135, AA565998, AA152050, AW302392, AA307807, AI537900, AI285612, AA719322, AW075461, AI312030, AI749122, AA577515, AI281461, AI709133, AA877950, AA626911, AA897048, AI339268, AA431339, AA434379, AW410373, AA838507, AA583851, AA948428, AI630908, N45537, AI683774, AA777293, AI339259, AI680415, AI568860, AA401576, AW410923, AI185339, AI336425, AI095727, AA629709, AI205211, AI720124, AI346880, AI283166, AI798356, AA973473, AI127802, AI860177, D50947, AA082127, D52613, AA219625, AA854702, AW316948, AA759068, AI934815, AA654145, AI547067, AA508221, AA100239, AI148317, AA313546, AA654136, AA808865, AA307039, AI088499, AA081214, AA011289, AA115715, AA937751, AI016473, AI127191, AW405155, AA400070, AI282681, AI335357, N80748, AA127304, AA687555, R53769, AI568742, N48687, AI140116, AI521388, AA426203, D51356, AA937388, AA160878, AW021649, W52039, AI754221, AI082367, N94545, AI929216, C18928, AI628201, AA705619, AI309410, N31579, AA148021, AA582605, AI360544, AW405717, AW084596, W93085, AI628179, W60171, AA172131, AA570580, AA244212, AA425135, AI360516, AA149821, AA826971, AA527434, D54986, AA082262, D52464, AA844753, W68292, H38887, AA439583, AA505963, H42532,
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	AW406369, AA310869, AA565036, AA601920, AI613170, W93140, D52764, AI753475, AA248532, R82957, F21991, AI224461, AA419357, AA878025, R90730, N73728, AI921112, AI270184, C18023, AA243980, AA243129, AW406964, F17736, AL037912, H42533, AW239507, F36736, AW022391, D82096, N91563, AA357599, R91006, AA171659, C17110, T29214, AI202074, AI364420, AA362537, N92927, N22547, H39502, AA088665, AI246324, R92221, AW404549, AA642135, AI223975, AA356093, R85205, AA010850, AW405622, AA996153, W03899, T40770, H56130, AA374687, H28669, N58050, N56654, T41118, R90754, AA375950, H58500, AA714991, AA169126, AA172285, AA876809, AA311153, R53768, AA662658, T94280, AA657417, AA352106, AA361715, R88749, AI568749, AA081936, H69479, AA313346, AA127303, AA742723, AI720345, D58890, X74070, X53280, X53281, M90357, AL121766, AC000403, M90356, AP000114, AP000046, AP000303, M90354, M90353, M90355, M90352, S79537, AL122049, AI2297, I48978, AF090934, I89947, AF017437, S68736, I48979, Y16645, AL080060, AL122050, AF113019, A77033, A77035, U35846, AL133075, A08910, A08909, A08916, U67958, AF090900, A08913, AF113694, AL049314, AF177401, U80742, X63574, AF097996, AL137521, AL122093, AF067728, AL080124, X72889, I89931, AL050116, I49625, AL110221, AL050146, AF078844, AF118094, AJ000937, AF183393, AF153205, AJ238278, AF090896, I26207, AF119337, AL110225, AB019565, AL122110, AL137557, AL110196, I33392, AL117583, U96683, AF125949, AL117435, A03736, AJ012755, AL137550, A65341, AL049382, E02349, X65873, AL050024, AF090903, AL133072, AL049466, Y11587, Z82022, AL117460, AL050277, AL122098, AF017152, AF113676, S61953, U72620, AL122123, AL133016,

AL137463, AF087943, AL133640, AF111851, AL050138, AL110280, AF118070, AL133080, AF113699, AL137271, I42402, AF113691, AR059958, AL117585, AL080127, AL133077, AF158248, AL133113, AL133606, AF106862, E07361, U00763, AL049464, AL050172, S78214, AL137480, AF104032, A58524, A58523, I03321, X82434, AL080159, Y14314, AL050149, AL050108, AF146568, AF090901, X93495, A08912, AF113689, AJ242859, AF026124, AL133104, AF113690, AL049938, AL096744, AL049452, AL133093, E15569, E07108, AL050393, AL137648, AL137459, AF125948, AL133014, AF026816, AF079765, AL122121, AF113677, AL049430, X70685, Z72491, A93350, AL117457, AL133560, AL117394, X96540, X98834, A93016, AF003737, AL080074, AL049283, AL137560, AF113013, X84990, AF008439, E03348, AL133557, Y09972, I00734, AL080137, AL133565, AL110222, I09360, AL137538, L31396, E00617, E00717, E00778, AL137527, U42766, L31397, AL137292, AR011880, AF091084, AL133067, AL137283, AF090943, Y11254, AJ006417, U91329, AF061943, AL137476, AL049300, AF118064, AL137533, AF111112, AL137556, E05822, AL137478, AR000496, U39656, AF185576, E08263, E08264, A90832, AF057300, AF057299, AL110197, AL133568, AR038969, AR038854, U58996, AL122118, AL137526, AL133098, AF162270, E02221, M30514, AF079763, A07647, AL117440, X53587, AF111849, A45787, AF000145, I09499, U49908, E08631, U78525, L30117, U68387, AF032666, X87582, E04233, Y07905, S36676, AL133665, X92070, AR020905, AR013797, X62580, T40255, T40256, T40778, T40803, T94627, R13201, R32388, R32389, R85206, H56210, H57659, H69882, N42592, N69059, W20471, W30838, AA054780, AA088804, AA114237, AA115714,				
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315	HOELH62	835079	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 486 of SEQ ID NO:315, b is an integer of 15 to 500, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:315, and where b is greater than or equal to a + 14.</p>	AA194597, AA586421, AA574367, AA577538, AA659655, AA665113, AA886042, AA886643, AA983150, AA989361, D78922, N83321, C04115, R29685, C18068, AA093539, AA094947, AA151399 AA131231, AW022937, AI081142, AA846081, AI753828, AW129500, AW162433, AW157051, AW151111, AW275853, AW162349, AW163199, AI718209, AI879416, AI079440, AI816004, AI929801, AI802736, AW264782, AI625443, AW162206, AW193538, AI281631, AI802717, AW157436, AW168282, AI816168, AW162675, AW162290, AA805556, AI469322, AI079426, AA769937, AW189049, AW157210, AI569079, AW263586, AW162529, AI086700, AI673396, AI287896, AI815820, AA860503, AW073671, AI167342, AI937843, AI092300, AI040397, AI879692, AW262678, AW193311, AI719787, AW161998, AW245055, AW247115, AI831096, AW073770, AW162763, AW156975, AI699034, AI066651, AI126823, AL048438, AW157410, AI952289, AW272644, AI335993, AI831067, AW157662, AW162566, AW157119, AW162599, AW162155, AI092686, AI193366, AA182841, AW157639, AI024844, AI952132, AI066677, AI050786, AI708756, AW073798, AI815883, AW157269, AW157636, AI817111, AI149767, AW237191, AW004722, AA650548, AA890458, AI285765, AW166784, AA805228, AI366693, AI360047, AA846439, AW268368, AW151257, AI572955, AI250447, AI869675, AW276022, AA315001, AI950781, AI859476, AW055327, AI095236, AI038159, AI689670, AI214582, AI434566, AW167172, AI954979, AI138978, AI879704, AW103542, AI814599, AA814485, AI692243, N69827, AI799673, AI336305, AI287892, AI283886, AI635860, AW103004, AW166416,
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BNSDOCID: <WG 0122920A2 I >

317	HAGFG91	835655	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1214 of SEQ ID NO:316, b is an integer of 15 to 1228, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:316, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1717 of SEQ ID NO:317, b is an integer of 15 to 1731, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:317, and where b is greater than or equal to a + 14.</p>	<p>AA099904, AI631935, AI636113, AA102106, W52091, AI493171, AI738738, AA026617, AI198416, AW149694, AA026729, AI650422, AI127033, AI335180, AA777858, AI017861, AA987216, AI093460, W59969, AA057071, AI807328, AI246495, AW204457, AA333011, AA668248, AA331427, AA385767, D80856, W01858, AA600297, R40732, AA332782, AI052089, R15233, AA332988, AA248854, AA668280, D80398, R14359, D81176, D80618, AA056926, AW136937</p>
318	HWLOG76	836203	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1194 of SEQ ID NO:318, b is an integer of 15 to 1208, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:318, and where b is greater than or equal to a + 14.</p>	<p>N23221, N36653, H81910, AA214587, R73738, AA777849, N26022, H29401, R67208, AL133910, T99837, R67209, T83252, R01891, N28803, R00406, T90722, H82004, F05176, R01892, H98132, M16505, M23556</p>
319	HBMAD50	836261	<p>Preferably excluded from the present invention are one or more</p>	<p>AW274763, AI860250, AW300818, AW452041, AW264919, W68003, AW451319, W67991, AI660148,</p>



320	H2CBN10	836762	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 742 of SEQ ID NO:319, b is an integer of 15 to 756, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:319, and where b is greater than or equal to a + 14.</p>	<p>AI963165, AA702336, AI139345, N68503, AI139033, AI590987, AI032783, AW129691, AW043665, AI292130, AI287559, AI591135, AA705198, AI287557, N73553, AI280962, AI076021, W95461, AA699304, AI346543, AW020629, AA593793, AA934432, AA100512, AA086345, W95568, N98223, AW242805, H91266, R94663, R94662, AA321333, H47843, AA469923, H21728, H91081, N22337, AA321942, T98851, C03757, H21929, AA365509, H47844, AI394436, AI991809, AA887041, AA729707, R10372, C04349, AA365510, H90356, R10470, AW392316, W01946, C21377, AA302284, AA302285, AC007688, AF117615, E12649</p>
321	HCE3164	836988	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1195 of SEQ ID NO:320, b is an integer of 15 to 1209, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:320, and where b is greater than or equal to a + 14.</p>	<p>AA307802, AI523577, AI743228, AI492174, AI798703, AI084062, W22441, AI003575, AI355318, AI452975, AI470192</p>
			<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 654 of SEQ ID NO:321, b is an integer of 15 to 668, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:321, and where b is greater than</p>	<p>AA448371, AA448777, AB011176, U27341</p>

322	HE2CH58	838140	<p>or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 795 of SEQ ID NO:322, b is an integer of 15 to 809, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:322, and where b is greater than or equal to <math>a + 14</math>.</p>	AW072415, AI700497, AW304733, AI077574, AA923280, AI567916, AA224592, H54698, AI671211, AI097097, T59834, AW339710, N33473, AI889306, AI590227, AL079963, AI698391, AI537677, AW074172, AI433157, AI702073, AL036403, AI633125, AI627988, AI815232, AI815855, AI677796, AL048656, AI923989, AI439256, AI536685, AL045500, AI521560, AI249497, AI567883, AI889189, AL036361, AW026882, AI491775, AW087445, AI475371, AW238730, AI637584, AL036631, AI537273, AI682971, AI469532, AW104724, AI207510, AW104827, AW129659, AI582558, AA259207, N33175, AI819326, AW148408, AL036802, AI802542, AI567582, AI610690, AI632408, AI619502, AL119863, AI954183, AI611738, AW160376, AL043293, AI564719, AI921248, N71199, AL119828, AW301409, AW051258, AI284509, AA572758, AL047763, AI445025, AI524671, AI801325, AA493647, AL038605, AW162194, AI340603, AI933589, AI587114, AW084425, AL041150, AI889376, AI537024, AA420758, AI539771, AI929108, AI916419, AI890214, AI538116, AI284517, AI926790, AI670009, AI890833, AI620284, AW161579, AA292158, AW163464, AW081036, AI696612, AI273901, AW132056, AI440239, AI955917, AI620003, AI862139, AI559296, AI280637, AL079794, AI866801, AI871697, AI624206, AI269205, AI648509, AW148363, AI567769, AI440448, AI934259, AI431975, AI702068, AI536638, AI433206, AW193530, AI254731, AW150453, AI634737, AW073270, AW198090, AI679174, AI287489, AI500523, AI355827, AI874261, AI285448, AI432969, AI286256, AI457369, AI866608, AA806720,
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323	HTHCW70	838459	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1428 of SEQ ID NO:323, b is an integer of 15 to 1442, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:323, and where b is greater than or equal to a + 14.</p>	<p>AI284084, AI686817, AI538259, AI866472, AI149311, AI521040, AW087207, AI828682, AI625079, AI432085, AI630928, AI271786, AI573060, AL036274, AI635461, AI500662, AW080327, AI280521, AI445432, AI801460, AW020561, AI800384, AW088793, AI635942, AI687362, AW087160, AI687728, AI612885, AI567128, AW118496, AI633297, AW088903, AW193911, AI863241, AI697137, AI623682, AI340519, AW086113, AW044391, AI567940, AI247293, AI963193, AW166903, AW075667, AI539780, AI591075, AW073865, AI610307, AI612913, AI611354, AW235482, AI818683, AI634345, AI435641, AW080402, AA279293, AI934295, AI799183, AI285735, AI671679, AI537303, AI687127, AW148536, AI567373, AL110181, AC006333, AC004757, AL035258, AC002416, AL078602, AL096776, AC005962, AC006039, AL031732, AC004485, AL034417, AF130342, AB019438, AL122021, AC004837, AC006313, AC005250, AC006197, AC009501</p> <p>AA846117, AW135735, AW450562, AA573644, AI800180, AI216990, AI375432, AA524229, AI800168, AI569363, AI701905, AW190675, AI634007, AW271364, AI179163, AC005332, AL035414, AP000117, AC004125, AC005529, AC004084, AL049869, AC004659, AC008009, AC005089, AL109839, AL021154, AC005081, AC007565, AC005015, AC002302, AC005670, Z98742, AC004671, AL031005, Z86090, AC003109, AC005899, AC002350, AC005874, AF134471, AL031311, AC002425, AL035089, AL031291, AL031577, AC006211, AC002991, AP001052, AC006312, AP000097, AL080243, AL121653, AC004687, AC005527, AL035419, AP000513, AC005488, AL035415, AL008718, AC007216, AL034420, U85195,</p>
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324	HAPOFI3	839262	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2687 of SEQ ID NO:324, b is an integer of 15 to 2701, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:324, and where b is greater than or equal to a + 14.</p>	AL022165, AL049843, AC005102, AC002470, AC009516, AC004966, AC004493, AC004491, AE000658, AL049759, AC006538, AF199339, AC006515, AC004647, AC002352, AC004841, AC005520, AC003962, AC004976, AC004983, AC003049, AF001549, AL024507, AC009248, AC004859, AC008372, AL022316, AL035249, Z82201, AC004883, AL022238, AF053356, AC004821, AF196970, AC004167, AP000555, AL050318, AL035450, AC005043, AC005037, AL031657, AC004143, AC005531, AC002997, AC005011, AC004967, AC007226, AC004522, AC007880, AC005694, AC002558, AC005944, AC002430, AC005328, AB026898, U95739, AC005778, AL035659, AC005082, AC004525, AC002115, AP000356, AL024508, AC007371, AC007384 AL134749, AI742631, AI800165, AI800177, AI817228, AW009788, AI983626, AI580092, AA479607, W72461, N31934, AA173790, AI826420, AI817464, AA486402, AW272227, AI829127, AI400650, AI859821, AA812768, AW160414, AI804420, AI810286, AI174621, AW162031, AI200823, AL045469, AA262076, AI436131, AW104123, AW204987, AA191221, W76519, AW131851, AI830727, AW075962, AI092268, AI095806, AW204297, AW163706, AA279162, AW054950, AA132187, AA173842, AI269189, AW272217, AI419217, AA937599, AA768309, AA213390, AA345939, AA346081, N79590, AW135722, R98330, AI476168, AI225142, AA219273, AA894959, AA114127, AI953548, W16579, AW020315, AA483620, AA132186, AW020778, AA306694, AI273292, N42771, AA127284, AA806664, R76355, C01324, AA477442, AA278394, AA122041, Z19431, D57433, AA055730, C16574, AA493588, AI263848, AI871532, AA360766, C15332, C15888, AA306589, AI572258, AA127285,
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325	HTGEX11	839384	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1056 of SEQ ID NO:325, b is an integer of 15 to 1070, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:325, and where b is greater than or equal to a + 14.</p>	<p>AW352394, AA213389, AI301771, C16185, AI419087, AW150588, AW352393, AA323124, AA379170, AI086134, T05903, AI868436, T83511, D56966, T34681, T05872, AI553717, AI383207, AA526564, AA355957, AA749012, AA360855, AA318574, N56217, AI417990, AA948636, D81687, D58170, R33934, AW386700, T83365, Z28512, AA191220, Z28428, AA055729, AA054844, Z19168, C16357, AW136837, D54272, AA384012, AA343818, AA114282, AI240376, AA641391, AA344020, AA278975, R33042, N55736, D57510, AA370282, AA779191, AA531526, AF000364, Y00701</p>
326	HWHGE39	839750	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1715 of SEQ ID NO:326, b is an integer of 15 to 1729, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:326, and where b is greater than or equal to a + 14.</p>	<p>AI307263, AI341699, AW024453, AI745197, AI768396, AI131562, AI972852, AI769539, AI421004, AI223225, AI140457, AA490731, AA397735, AA259003, AA778335, AI131101, AA252568, AI127219, AI128477, AI086809, N94182, AI291495, W92624, AI308249, H98500, AI143131, AI351197, W94551, AA453457, AI927383, AA399649, W95982, N63824, W94655, AI277363, W94870, AA252526, AI377847, T79601, AI094080, AI452626, AI880779, AA340311, AA134597, N55122, R56542, AI050906, AA258841, H11867, H87633, AW020601, AI372498, AA773252, AI248134, Z45013, AI372497.</p>

327	HNGIN84	840028	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 672 of SEQ ID NO:327, b is an integer of 15 to 686, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:327, and where b is greater than or equal to a + 14.</p>	AA747544, AI378207, AA134596, R83208, AA826061, AI473394, H99056, C02387, AA046504, AI858424, H87634, H11507, AI783747, AA587631, AA453958, AI783727, T32984, AA648894, AA491222, AA085314, AA687222, AI814769, N42229, T32983, R56147, AA313920, T35898, R50984, AA976148, AI440280, AA383791, AA568124, AI758839, Z40742, AA836078, T79686, AA743519, AA731324, AI890259, AI758592, AA909604, T16579, T25933, AI291768, AA210619, AA045449, AI740792, AF100757, AF071314, Y17674 AA487992, AA584890, AA130458, AA134207, AA487881
328	HTGAZ34	840572	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1227 of SEQ ID NO:328, b is an integer of 15 to 1241, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:328, and where b is greater than or equal to a + 14.</p>	AA843885, AW137638, AI569105, AA725050, AA478036, AA315754, AA779127, AA707886, T87515, AI186887, AA931268, AA478194, AA724969, AA506411, AA508167, AA884913, AI204147, AW188578, AI298619, T87514, AA334550, AA001503, AA373179, W90704, AW389401, H84879, AA348632, AI123472, AA382476, AA292666, AI221355, AA371060, AA305122, AA862608, AW051322, AA478193, AA715396, F00235, T05434, T10965, AA018146, N26345, L13689, AJ132013, S62198, M64067, M64279, M64068
329	HNTEF34	840675	<p>Preferably excluded from the present invention are one or more</p>	W44408, AA527501, AI052563, AA160185, AA428942, AI500231, AI921016, AA862309, AI862394, W44544,

			<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1638 of SEQ ID NO:329, b is an integer of 15 to 1652, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:329, and where b is greater than or equal to a + 14.</p>	<p>W94846, N28477, AA160184, AA931691, AA809361, AI359819, AI279594, AA252345, AI061452, AI597929, AW014245, AI819250, N98731, AA954145, AI276202, AI828926, AA026286, AI167799, AW027703, AW168057, AI559587, AI521276, W57884, AI991979, W94847, AI687722, AI434201, N39148, W25095, W57885, AA447263, AI446772, AI073636, AI094763, AA280864, AW273344, AI346062, AI424178, AA625675, H99758, C75468, AI581157, N93238, AI033439, N45470, AW407812, W19310, AI683608, AA917615, AA148612, AA252324, H01172, AI814232, AI263567, W22475, AW058146, AW241157, R42644, T50250, H46994, W93787, AI358426, H01257, AA442735, AI129045, AI375564, AW150517, AA364849, H46453, AA303251, W31169, AA148611, AI814030, W93786, AA364527, N70145, H12436, AI659876, R08467, AA368445, AW366545, AA299987, AI648609, AW257791, H12435, H22406, AW382318, AA877720, AW382316, AA281164, AA805601, AI285165, AI885988, R33516, N98322, AA482622, AA447138, W26854, AA774629, H22405, AA482477, AW380284, C06036, T17082, R08461, AA026285, N55950, AI832432, AI701223, N66302, R14041, N46559, AA151931, AA059054, R17411, W63706, AW366547, AW014828, C03017, AW129264, F37323, AL079963, AI521560, AI921254, AI537261, AI624293, AI874166, Z98484, AL039086, AI089782, AI565172, AI670009, AI886181, AI161279, AI890507, AI590043, AI445992, AA279293, AI434741, AI619607, AI241923, AI114703, AI678357, AL036673, AI866770, AI309306, AA806719, AI687568, AW118518, AI500714, AI355779, AW051088, AL040586, AI620284, AI553645, AW149925, AW163823, AI863321, AI687168, AW238688, AI863191, AI421091, AW152550, AI955987, AL046595, AA502794,</p>
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AI184903, AI491805, AI538829, AI632408,  
AW104141, AI435253, AI627988, AI613038,  
AI951062, AI635067, AI690426, AW089275,  
AI799674, AI433157, AI801152, AI702073,  
AI690748, AI921248, AI540674, AL046466,  
AI281757, AW163834, N33175, AW162194, AI345688,  
AL043355, R32821, AA421957, AI628337, AI621341,  
AI633125, AI620089, AI678480, AI632997,  
AI612750, AI698391, AL039716, AI538564,  
AW262767, AI915291, AW152182, AI538850,  
AI270295, AI271796, AI582932, AI872423,  
AI623941, AI500061, AI572717, AI889189, W46378,  
AI890907, AI609409, AI583558, AA641818,  
AI361701, AI866469, AI620302, AI884318,  
AI923989, AI134712, AI686817, W74529, AI225023,  
AI866127, AA464646, AI242248, AI859991,  
AI869125, AI445965, AI587121, AI623622,  
AA579618, AW026087, AL117430, Y14314, AF026816,  
I89947, AR038854, AL137488, AL133665, AL117416,  
AF183393, A65341, U78525, X79812, A08916,  
AL122100, AL049452, U42031, AL080163, A21103,  
I48978, AF008439, A08913, AL050393, S36676,  
I17544, AL137533, A08912, AL110280, A18777,  
E02349, AF061795, AF151685, A08910, A08909,  
AF113677, AL122050, AF087943, AL133637, A08908,  
AL137705, AL110218, S61953, A77033, A77035,  
AF079763, AF106697, AL133113, Z97214, AL049283,  
I89931, AL137550, AL137548, I89934, I49625,  
AL137530, AF061573, AF032666, AF091084,  
AF113019, AL137478, AL049430, AL080159,  
AL050149, AL137558, AF061981, AF185576,  
AJ005690, E12747, AR020905, E03348, A65340,  
E03349, A76335, AR034821, AL137480, U58996,  
Z82022, AL117460, I09499, AL133619, AL137479,  
X72889, AF003737, A08907, AL122106, AL023657,  
AJ012755, S76508, L19437, AF097996, E05822,



				<p>Z72491, AL080126, AL117435, A03736, U75932, S75997, Z37987, A45787, AL050138, U88966, X63410, AF115392, AL110221, AF158248, AL050155, AL137641, U35846, E02221, A15345, AF118094, AR029490, AL049314, E15324, E01314, AF090900, AF090903, AF125948, AF113676, AL080140, AL122118, AL137292, AF106862, D83032, I89944, I33392, AF162270, AL137271, AL133081, AF026124, AL050108, AL133072, AF113691, AL122123, AL137537, AL137463, AL050277, AF113690, X82434, Y16645, I48979, AF067728, Y11587, AL137560, AL080154, AL137459, AL122098, M96857, AL137529, AJ003118, AF016271, AF106657, AL080148, AL137665, A58524, A58523, A86558, AL133640, AL049938, AF153205, AF111849, U86379, AJ238278, AL137574, U80742, A08911, AL133560, AL080074, AF017437, S78453, E04233, U67958, AL117457, Y07905, AF137367, AF113013, AF061943, AR011880, AF078844, Y10655, AL122110, AL133067, AF126247, Y11254, AF111851, AF210052, AL117583, L30117, AF176651, E07108, M27260, S7771, AL122093, U42766, X96540, AF028823, AF100931, X62580, AR059958, AB007812, U00763, L31396, AL133010, L31397, AL137476, AF169154, L04849, X06146, E06743, A07647, AL137256, AL117440, AL117394, AR013797, AF114170, AL137526, AF090943, AL133558, AF215669, U95114, X80340, AL110296, A90832, AL137711, AL133075, AL133016, D16301, X57961, AF177401, AL133568, I32738, AF090901, I68732, I00734, A18788, AR068751, AL049464, AF067790, Y10823, U53505, AF113694, AF207750, AL050024, Y10936, AF113699, AF069506, I03321, M86826, AL080234, A93350, N47595</p>
330	HTEAF73	840708	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a</p>	<p>AA418230, AI656823, AW237075, AI742396, AA418083, AI638335, AI990631, AA101114, AL135583, AA082768, AA453890, AI093952,</p>

		<p>nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1902 of SEQ ID NO:330, b is an integer of 15 to 1916, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:330, and where b is greater than or equal to a + 14.</p>	<p>AI275588, AI991570, AI825352, AI431506, AI168645, AI223864, AI417141, AA426139, AI970427, AA424919, AA758905, AI680900, AA741277, AI800697, AI263798, AA411231, AI150145, AA422115, AA313750, AA453804, AA769817, AA625187, AA904708, AA152290, AI797514, AI924204, AA150232, AI127559, AA300364, AA969156, AA770192, AA905158, R21272, AA131634, N22711, AW238233, Z44053, AA811505, R45362, H13385, AA382511, Z41665, H06049, AA131718, T35196, AA836102, AI868861, Z42470, T36015, AI434398, AW050658, AA093790, AA749290, Z93930</p>
331	HPJC142 840847	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1644 of SEQ ID NO:331, b is an integer of 15 to 1658, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:331, and where b is greater than or equal to a + 14.</p>	<p>AI357436, AI948511, AI972408, AI826256, AI697857, AI651095, AI761400, AI831948, AI422683, AW341450, AI417903, AW165982, AI936396, AW271819, AI421517, AW300444, AI768573, AI288333, AI927043, AI523543, AI420397, AW085599, AW149563, AI283759, AI392973, AI634398, AI889625, AI817020, AI831197, R56168, AI675030, AI368689, AI190058, AA393313, AI694269, AI830691, AI830712, AW172298, AI375540, AI827278, AA988563, AI992087, AI862664, AI082343, AA594835, AI300150, AI253197, AA653712, AW237591, AI304849, AA872799, AI926819, AI452397, N29545, AA837984, AA937125, AA502373, AI831516, AI262912, AI823952, AA057861, R33735, AI630735, AW028564, AI654087, AW294325, AI619923, T04917, T35202, AA759006, AA356968, AI632766, N52709, AA043670, AI684627, AI919454, AA642808, T96330, AI300625, AW025718, AW196914, N47832, AA057051, AI806818, AA371419, AA974906, C16798, AW193208, AA423938, N32607, AI369782, AA256421, AI769153, T93496, AI991799, T27338, W15206, AW378641, AW403029, AA043828, D11567, D11569, D11572,</p>

332	HHBHM75	840848	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1088 of SEQ ID NO:332, b is an integer of 15 to 1102, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:332, and where b is greater than or equal to a + 14.</p>	D11571, D11561, D51030, AL035461, D11568 AW027446, AW001374, AI905427, AI905448, AW170482, AI888710, AW189228, AW248185, AW247154, AW269605, AI491924, AW166866, AI806696, AI913299, AI248303, AI950990, AI923354, AI985923, AA115932, AW405656, AA580449, AI683829, AA121000, AI923345, AI983165, AA311496, AW339176, AA613123, AW008308, AA311962, AA308220, AI092707, AI670040, AI446320, AA976924, AA827930, AA155688, T26531, AW081652, AA722463, T26545, AA503072, T26607, AI027785, AI673460, AI475803, AA310484, AW166337, AI469228, T26606, AI936946, AI904232, AA313581, AI350054, AA155632, AA113213, AI682048, AA057298, AI924745, AW074024, AA865529, AA219765, AW362575, AA863440, AA394308, AA146598, AI193428, AI803845, AA463503, W52876, AA722103, AA594814, AA058743, AI287875, H69098, AA398511, T17392, AA045866, AI073617, AA099234, AA160447, AW439865, N78080, M78213, W60083, AI827155, AA586410, AI690668, AW176030, AW176409, AW362998, R61067, H82364, AI458739, R58724, R10066, AA233537, AA196375, AI220757, AA143412, AA195987, H68866, AI648414, H68867, AA375183, AA377742, AA377577, AA376079, AA551794, AA370466, F08770, AI659128, AA953614, AA602742, H47859, AA099233, AW385630, AA876847, AA357152, AA376133, AA293437, AA043086, N88762, AA345571, H47858, AI438988, AI471161, AA302122, AA512948, AI342089, AA373023, R10163, AI904755, AA079888, AA669435, N84278, AA337905, AA173257, AI001859, R86048, AI335883, AA333491, AA377683, H08322, AW404843, AA345193, AA337117, H61230, AA296661, AA331127, AW175900, AA284503, AA385104, AA809714, AA287233, N48458, R72725, AI673105,
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333	HDTLJ39	840860	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 4187 of SEQ ID NO:333, b is an integer of 15 to 4201, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:333, and where b is greater than or equal to a + 14.</p>	AA079887, AA372658, AA131067, T23830, T26365, N58491, AA385252, AA102153, AA731195, AA301690, AA303689, AW375743, AI270607, D12026, AA573356, F09056, C17112, AA463552, AI904284, AA293046, D56378, AA463551, AA055712, AI658862, R54183, AA173248, AW405930, R72646, AI904233, AA366862, AA742856, AA381048, H08224, R57168, AA343172, AW250825, N58717, AI350282, H61231, AA777755, AW375792, AA045865, AW375803, AA774658, AI904212, H22081, H82260, AW196192, R57822, AA287216, AW450496, N54277, AI141404, S85655, E05692, I15314, X78682, AL050401, I62356, M61219, L14273, L14272, AC007676, I62357, L14484, L14274, E05693, I15315, I62361, L14485, AR016469, AR016461, AR016462, AR016463, AR016464, AR016466  AA642209, AI862701, AI749737, AI207407, AW411488, AA910996, AI761749, AW026187, AI985751, AI972815, AA554566, AA422160, AI613444, AI120666, AW161883, AI954186, AI693320, AA463858, AI888672, AI890575, AW360824, AA613926, AW360809, AW172716, AI480116, AW328340, AA772153, AI693385, AW148801, AA504731, AW166116, AI953781, AA581366, AA772136, AW008173, AI983719, AA305042, AW169265, AA205324, AA576873, AI955286, AA873317, AA176782, AI952720, AW161462, AA974654, AA463350, AW362917, AW089874, AI992295, AI147134, AW362904, AA676616, AA456144, AA313902, AI620307, AA169276, N67918, AA071214, AI076734, AI277009, AI242706, AA836769, AI926158, AA862276, N63379, AA411497, AA837197, AW275808, AA828942, AA307920, AI079789, AI536133, AA487271, AA149575, W68381, AA632813, AI373024, AA504634, AW401448, AI872463, AI422673, N62851, D11545,
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AA127472, AA160284, AA151791, AI591115, AA225924, AI278854, AA173360, D82110, AW022247, C06382, AA404505, AA127585, AA311655, AW270729, AA487388, AA262816, AI251934, AI283345, AI707664, AI474126, N64787, AI917908, AI811519, C05151, AI935294, AA806053, AI608766, AA243268, AA857683, AW263998, N67463, N7758, C02425, R78094, AA722996, H41078, AW274553, AA992418, AA195437, AI083733, AA496439, AI435396, AI267588, AI635182, AA947935, Z21160, AI978716, AI142767, AW136784, AA356091, AI631162, N76199, AW129671, AA421263, AI918869, AI135216, AI689671, AA581476, AA811001, AA662886, AA102524, AA223329, AA261939, AA426276, AW366458, AI017431, AA496488, AA620579, AA864246, R78515, AA082708, AW316556, AI362074, AA057684, M78876, AA504466, AW026306, AI075348, AA223248, AA643835, AA774179, AA262815, AI273316, AI270735, AA223614, AI799202, AA206268, AA083297, AI669447, N85166, AA160285, R22387, AA988824, C02916, AW079254, AA295623, AW383412, AI357670, AA329338, AA947854, AA380160, AI093880, AW367347, T16262, AW089246, R78181, AA748669, AW383415, T31816, AA101058, AA082230, AW204421, N81179, AW383429, F06042, AW411489, AA045056, AA968507, AA357441, N88683, AI817500, AW383430, AA356304, H41731, AI808848, AA441826, AA053850, AA384381, AA081937, AI803541, AA484162, W26056, R93829, AA639001, AA205970, AI916464, N85712, AI361946, Z38961, AA649340, AI127936, F00682, T50221, D31110, AI066570, AI500472, AW328341, AA345411, AI479118, AA311643, AA626103, AI061276, AI886996, AI784598, AA456414, H40124, T50269, AA226080, AI183884, AI344757, AA304567, AA303999, AI653590, R48491, AI953530, M86667,				
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334	HE2DT31	841015	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1225 of SEQ ID NO:334, b is an integer of 15 to 1239, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:334, and where b is greater than or equal to a + 14.</p>	<p>D12618, X61449, AF062594, AF086080, AF114156, AC006157, AF002992, D28430, T89645, T89919, T93704, R21871, R78560, N28359, N42893, N77065, W67341, AA034244, AA044935, AA057392, AA071442, AA082360, AA082229, AA083188, AA167113, AA191227, AA522823, AA730326, AA857065, D82604, D82635, N85023, C00193, C00199, N87331, N88852, N89408, C21319, AA091285, AA091688, AA094300, AA205974, AA206598, AA247212, AA421361, AA441853, AA634627, AA663685, AA665466, T10506, Z30218, T48571, D45597</p> <p>AI357350, AA845435, AI209067, AI858019, AI884482, AW150823, AA554692, AI620110, AI963113, AI134405, AI889492, AI689168, AW276311, AA627856, AA860493, AW274639, AA633500, AI801448, AI613503, AA069773, AW338931, AW029541, AA127719, AW263706, AI687577, AW130929, AI625340, AI653596, AI200795, AW419312, AI758722, W73806, AI829356, AI701949, AI873677, AI033996, AI041421, AA069809, AI805331, AW236282, AA889251, AA628724, AI453807, AI125984, AA894635, AA633499, AA459963, AA972651, AI624681, AI537603, AI246146, AI460275, AA258207, AI250056, AI493175, AA782622, AI339580, AA838393, AI057611, AI680433, AA250884, AI334814, AI097090, AI445800, AI287795, AA258206, AI537026, AI925257, AA722227, AA215296, AA661865, AI805513, AW151003, AI926744, AA954248, AI275682, AA573552, AA693482, AI440209, AA056740, AA250827, AI273997, H85165, AA236042, AA133361, AI084300, AA447092, AA236043, N48966, D54114, AW411052, AI753697, AI128212, AA649576, AI265910, AI583228, AA022865, T28553, AI224070, T15984, AI370374, AI828756, AI811875, AI251107,</p>
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	AI887260, AA805125, AI022896, AI287368, AI036313, AW189991, AA961437, AW057820, AI358161, AI554559, AI921683, AI962926, AI870193, AI252638, AI961544, AA877770, AI190502, AA670156, AI560836, AW440962, AA779688, AA814212, AI620728, AI567087, AI183461, AA582167, AW248658, AI581066, N94359, AI081077, AI911926, AW151092, AI139073, AI023149, AI672669, AI559532, AW054954, AW167338, AA564446, AA872906, AA992431, AI002784, AW130993, AA948355, AW264551, AA633945, AW029143, AA972620, AA582118, AA970957, AA292304, AI872620, AI084043, AA679598, AI356936, AI969636, AA226958, AA630406, AI584170, AI829166, AA669946, AA563876, AA779317, AA613036, AI444935, AI371316, AW071739, AA946753, AI554539, AI564548, AI434491, AI144337, AA947643, AI479802, AI126094, AI079790, AA037671, AA877791, AI628003, AI927436, AW264791, AI802229, AA706037, AI187314, R50864, AW102949, AW131317, AI807613, AW341512, AA553824, AW070293, AA935320, AW028226, D55286, AA916638, AA428601, AA421689, AI798718, AA904350, AA480598, AA151443, AI432922, AA912466, AI680320, AA678327, AI000721, AI569746, AI220996, AA399206, AA570384, T07375, AA708921, R81287, AW264121, T40475, AA976019, AI568145, AI336086, AI359461, AI476687, R80980, AI282762, AW088889, AI365679, AA058411, AI288329, AI249898, AI419896, H05937, AA872284, AI300645, F04083, AA989255, R42835, W38863, AA450039, H85126, AA421690, H92458, H96689, AA460053, AI819842, W92987, AA381350, AA852359, AW338780, X72727, AC005611, S74678, L29769, D17711, AJ003024, L31961, T60712, T39204, T89115,

335	HE2AY01	841017	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1235 of SEQ ID NO:335, b is an integer of 15 to 1249, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:335, and where b is greater than or equal to a + 14.</p>	<p>R23975, R80780, R80929, R81030, H45854, R85410, H86110, H92459, N45682, N64273, N67340, W60856, W79809, W79590, AA031812, AA031892, AA039603, AA127774, AA150512, AA186437, AA188784, AA484831, AA524510, AA577009, AA838126, AA888617, AA974294, AA978242, AI000986, N84928, W28888, AA093374, AA095419, AA635022, AA635099, AA283454, AA905955, AI015482, F04704</p> <p>AA902202, AI991159, N71125, AW239043, AA179538, AW084622, AI049652, W17312, AI453333, AA179507, R21815, AA907419, AA112660, AI659183, R21764, AA994481, AA913594, W01555, AF085343, U13219, Z65729, Z65728</p>
336	HWLOA34	841030	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 708 of SEQ ID NO:336, b is an integer of 15 to 722, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:336, and where b is greater than or equal to a + 14.</p>	<p>T85016</p>
337	HBXFG67	841241	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by</p>	<p>AI341659, AI431773, AI161135, AW088752, AI264206, AI346653, AI307747, AI656069, AI634899, AA704137, AI636369, AI929120, AI092945, AA056359, AA633329, AA293042,</p>



			<p>the general formula of a-b, where a is any integer between 1 to 2196 of SEQ ID NO:337, b is an integer of 15 to 2210, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:337, and where b is greater than or equal to a + 14.</p>	AA868271, AI431794, AA582836, AI150598, AI679251, AI953495, AW117960, AA031264, AA218868, AI858867, AI697931, AI042345, AI369319, AW151607, AW130514, W84552, AW190035, AI521653, W47659, AA463596, AW083315, AI380661, AI339765, AI634188, AI091725, W84467, AI917220, AA454608, AA460966, AI334973, AA775465, AA284783, AW026215, AW058396, AI143787, AA507951, AA774425, W96343, AI356085, W70195, W52280, AW273175, AI858872, R77389, AI972238, AI198569, AA458530, AI521450, AA284712, AA708123, AI679827, AI623758, AW130702, AI761883, AI921355, AA971856, W04932, N41005, W56619, N91167, AA994099, AI161235, H41879, AI086967, AI700384, AA928492, H80551, AI066399, AI262380, AI337960, AA884190, AI754264, AA037318, AA031855, AI332848, AI287381, AA031854, AA206877, AI446456, AI870016, W72718, AI572475, AA461275, AI130700, AW273233, H19764, AA293434, AW170235, AI298881, R71854, T72569, H49101, AI092820, AA609652, W16568, H18402, AA620623, AI928876, AI289918, W23005, AW205932, AA016293, H75818, H39184, AI678119, AI362577, AI338332, AI301256, R85932, AA640114, H26985, AI016016, AA757695, AI091380, N98497, R93828, AI636966, W68375, AI950811, AI245331, AI086541, AA325188, H39183, H43811, M78190, AW148421, W76444, AA035782, T28818, AI190360, T03362, AW148308, W47607, H18293, H51175, N94350, W24020, W31043, AW340439, AI266495, AA325300, AI948535, AA025152, H43814, H28104, H40890, AA496283, H41878, T64820, AI631099, AA375412, F12341, AA220968, N45017, AI288047, AW000806, AI288037, W47660, H24560, AI042606, AI634927, AA402851, W52281, AI288045, D59229, AW129613, AI956106, F08608, R70428, H21526, R73026,
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338	HWLOF51	841957	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 727 of SEQ ID NO:338, b is an integer of 15 to 741, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:338, and where b is greater than or equal to a + 14.</p>	<p>AI952459, H19765, F07127, AA350880, AW148295, AA340723, H21210, H18251, W48618, AI870946, N70611, AA324570, AA852604, H80607, R87323, W56649, AA133516, W70156, AA101608, W90400, R84543, AL119694, AI278528, AW131963, AA349925, AW070591, H43721, AI492026, AA115697, AA852436, T17308, AA852605, AA852435, H49042, AI215065, AW392427, R48571, AI057267, W48851, AI346654, H30240, AI909832, R18486, R77390, AW102876, F03416, AI869095, T23722, AI365342, W47411, N56601, W68334, F09962, F04814, AW149325, AA375923, H68511, AI127125, AW080668, AI198415, R51358, AI565830, H51188, M11749, AJ238589, U93310, S59749, R48670, R51464, H18401, H25150, H30297, H30868, H30871, N74891, N93043, N93044, W21511, W21512, W94826, W96342, AA017674, AA025151, AA027955, AA031395, AA040025, AA069269, AA069418, AA069509, AA114873, AA114837, AA419091, AA428836, AA659114, AA836669, AA903136, AA903220, AA918099, AA973427, AA069497, AA757619, AA774630, AA300505, AI492483, AW303374, AI631790, AW206379, AW195675, AA278582, AI039812, AW338448, AW004841, AI766809, AW043846, D60088, AA902168, AA889412, AI914252, AI392952, AI671021, AI022063, N22335, AW173301, N75207, AW086444, AI735105, AA758009, AA731697, AI168274, AW271622, AI927028, AA283606, AA043425, AA043723, AI423553, AI934402, AA283607, AA844272, AI913306, AI624989, AA725454, T78177, AA535230, AA354991</p>
339	HLDOK36	846025	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a</p>	<p>AW245401, AA662107, AI523949, AW245758, AI031817, AA725300, AI359207, AW270125, AA293413, AI090434, AA568269, AW013988,</p>

			<p>nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2031 of SEQ ID NO:339, b is an integer of 15 to 2045, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:339, and where b is greater than or equal to a + 14.</p>	AA708767, AA682427, AI376689, AI033528, AW449244, C01335, AW263988, AI343327, AI360743, T50230, AI992119, AA908655, AA318766, T50243, AA635978, AW204989, AA830678, AA047668, AA748433, AA383495, AI635643, AA862542, F35595, AA218681, AI358311, AA090354, AI432940, AW050934, AW362290, AI636445, AW075351, AI800433, AI135661, AI349957, AL044207, AI800453, AI343112, AI349598, AI345735, AW080079, AW268253, AW148320, AI281837, AL036980, AW089572, AW129171, AI597750, AI290154, AW149851, AI282281, AW090013, AI869367, AI340582, AW075413, AI500077, AI567612, AI572787, AW074993, AW302992, AI538790, AI500659, AL119457, AI312152, AW080279, AI571861, AI349614, AI440426, AI925156, AI801544, AI309401, AW075084, AI784252, AI270707, AI348897, AI307708, AI349937, AI567351, AI439089, AI439717, AI862144, AI758437, AI590128, AL036403, AI950664, AI282655, AW169653, AI634224, AL040243, AI279984, AI281779, AW193635, AI475134, AI620639, AI499463, AW071349, AI684265, AI349004, AI862142, AL036146, AW268220, AI445165, AI568855, AW301300, AW075207, AI349256, AA508692, AI343037, AI520862, AI648684, AL038778, AI349645, AI334884, AI632033, AL121014, AI569583, AI497733, AW274192, AI313352, AW301409, AI560099, AI857296, AI633073, AI312428, AI580927, AI274541, AW071417, AA225339, AI627893, AI828818, AI818206, AI436456, AI273142, AI571133, AI609190, AW151485, AW08048, AI281773, AA470491, AI636183, AI636585, AI572569, AI819970, AI919058, AI274508, AI564247, AI699857, AW149287,
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	AW183621, AW068845, AI783504, AI824764, AW302965, AI436644, AW074869, AW263453, AI680388, AI564992, AI269862, AI536638, AI702068, AI349226, AI627360, AI249257, AI491852, AI952360, AI249323, AI273048, AL043326, AW118512, AW131954, AI653836, AL036396, AW196141, AI612920, AI439478, AI269205, AI678989, AW104724, AI554484, AI349933, AI682841, AI624206, AI610756, AI811344, AL036361, AW087445, AI912866, AI571551, AI690312, AI275175, AI702406, AI637584, AI340603, AI570384, AI538716, AI690490, AW002342, AI475451, AI569616, AI872074, AI872711, AI702433, AW301505, AI224992, AI799199, AI679764, AI554427, AW082040, AI815855, AW269097, AI926790, AI564719, AI653541, AI269696, AI889376, AI874109, AI499146, AI868831, AW103371, AI524671, AI521012, AI591073, AI633419, AI921248, AI307543, AI498579, AI590120, AI866002, AI619502, AI571909, AI433976, AI802542, AI866100, AI744923, AI922901, AI828731, AI917253, I48979, Y11587, I89947, I89931, AF090943, AF113699, AF113694, AF118064, AL049314, A08916, AF118070, A08913, L31396, L31397, AL049452, AF113013, AJ242859, AL110221, AL080124, U42766, AL133557, AL122093, AL050393, AF113691, AB019565, AF078844, AF113690, AF113677, AL137557, AL133093, Y11254, AL122050, AF111851, AL117460, AL050149, AL050116, AF125949, AL050146, AL133606, AF113689, AL122123, S68736, X84990, AF090900, AL133565, AL133640, AF113676, AF158248, AL050108, S78214, AF090903, AL080060, AF090896, AF091084, AF113019, E03348, AF090934, AL110196, AL049466, AR059958, I48978, AL133075, AL117457, AL133016,

	AF125948, AL080137, AF090901, AL137527, X63574, AL122121, AF106862, E07361, A93016, AF017152, AL133080, AF146568, AL049938, AL050277, AL137459, AL117394, X82434, AL110225, AF104032, AJ000937, AL096744, U91329, AL050138, AF079765, I49625, AF017437, AL137283, Y16645, AL049464, AL133560, AL117585, E02349, AR011880, AL137550, AJ238278, A65341, U00763, A08910, AL049300, AF177401, AF067728, A08912, AF097996, AL049430, E07108, AL117583, AL117435, AL049382, A58524, A58523, A08909, AL137521, AF118094, Z82022, AF183393, I03321, AL122098, AL137648, X96540, U72620, AL050024, X70685, A77033, A77035, AL137463, X72889, AL137271, AL137538, AL080127, U80742, AL133113, A12297, U35846, I33392, A03736, AL122110, AL049283, AF087943, X93495, I09360, X65873, X98834, S61953, AL110197, I17767, AF061943, AL080159, E08263, E08264, AF026124, U67958, AC006336, I42402, Y09972, AL137560, AL133568, AL122049, AL133072, ARO38969, E15569, AL133014, Y07905, AF095901, AL133098, AJ012755, AL137523, I66342, AR054984, AF111112, I26207, AL133077, M30514, I00734, AF026816, AF119337, AL110280, A93350, E00617, E00717, E00778, A08911, AR000496, U39656, Z37987, AL137556, AL137526, AL137429, AC004093, AF061573, U68387, AL133104, AF003737, A45787, AF000145, AL050172, Y14314, AF106827, AF057300, AF057299, AR013797, A90832, AL122111, U58996, A07647, AF079763, X83508, AF100931, Z72491, AF153205, AF185576, E08631, U78525, AR038854, AL137292, AF162270, AL133067, E04233, AL080074, AL117649, U96683, AL117440, AL137476, X87582, AF210052, L13297, AC006371, E05822, AF051325, L30117, AL137656, AL050092, AC002467, AL133081, AL137533, AJ006417, X92070, AF091512

340	HSDJF12	846362	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2060 of SEQ ID NO:340, b is an integer of 15 to 2074, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:340, and where b is greater than or equal to a + 14.</p>	<p>AW084558, AW409927, AW304724, AW136749, AI745388, AI979175, AW134503, AI817727, AA593923, AI675562, AA573915, AI652793, AI683795, AI922809, AI983612, AI984843, AA573905, AI656045, AI983786, AI984139, AI380162, AI361395, AI936791, AI479830, AI039924, AA588051, AW206967, AI590585, AI673630, AL045794, AW137010, AI347176, AI288836, AW170399, AI287323, AW271527, AI380626, AW197398, AW193824, AI869939, AI371858, AW013814, AI650707, AI861931, AI201641, AW050592, R00081, T02921, T53389, AA937517, AA552662, AW304869, AI015077, AI262657, AI309572, T24119, AI460271, T24112, AI932957, AI950720, AI652807, AL036630, AA327548, R72802, R50426, AI634175, AI986002, AI089131, R47791, AI659375, D51250, AL044412, AL044364, AL040992, AL039109, AL038531, AL037726, AI986009, AL039629, AL039625, AL039648, AL038837, AL039074, AL039678, AL039108, AL039538, AL039564, AL039156, AI880486, AL039659, AL039566, AL039509, AL039476, D80253, AL039128, AL044407, H00069, D80043, AI418738, AL036973, AL045337, AL037051, AI973094, AL045353, AL039386, AL039423, AL045341, AL042909, AL039410, AL039150, D59787, AL038821, AL038025, AL044530, AL036725, D80219, D59275, AL043445, AL043422, D80227, AI535983, H26655, AL043586, AL043423, AL039521, D80240, AI719489, AL043441, D80210, R52030, D51423, AA327517, T23947, AW272341, D80134, AL036196, AA523545, D59619, D80193, AL037639, D80391, AW450335, AL037615, AW451070, AW241543, D80196, AL036767, AL039085, C14227, D59927, AI535783, AL036117, D80949, AA936966, AL037526, D80366, AI918271, D80168, AL036238, R47228, AW452756,</p>
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	AL036679, AI652616, AL037601, AL039459, AW197366, D50995, T11051, D81026, AL039504, D25775, AL039842, D80045, H26610, C14014, C75259, AI968929, AW087283, AL036964, AL036733, AL036158, AL037027, AL036924, AL037054, AL036765, D59889, AA100205, C15076, AL038851, AL037177, D80022, AL036998, AI557751, AL037047, AL036227, D80038, AL037643, T23659, AL036133, AL036418, AL036650, AL037082, D80195, AL036163, AW293068, D58283, AL036207, AL037124, D81030, T11417, AL036191, AL036167, AL036132, AL037021, D80188, AL037049, AL036190, F13647, AL037600, AL037679, D51799, D80378, D59467, AL036139, T03269, AL036152, D50979, T48598, D80522, D80212, AL036900, C14429, C14298, D59502, AL037178, AL042334, AA514190, AL048425, AA285331, Z21582, AW451416, D80164, AL039555, D80166, D59859, D80269, D59695, D84239, AC006950, A25909, A85396, A86792, I95742, X68127, A44171, A85477, AR037157, AR062871, AR017907, AR062872, AR062873, AR067731, AR067732, A58522, A91750, A20702, A43189, A43188, A20700, A84772, A84776, A84773, A84775, A84774, AJ244003, AR036905, A95051, A95117, AR031374, A49700, AR031375, A58521, A38214, AR020969, I56772, I95540, AR018924, A63067, A51047, A63064, AR018923, A48774, A63072, A48775, AR068507, AR068506, AR015960, AR000007, AR015961, A18053, A23334, A75888, I70384, A60111, A23633, A23998, A95052, A98767, A18050, AR007512, A93963, A93964, I60241, I60242, AR043602, I63120, AR043603, AR043601, AR054109, A58524, A58523, AR025207, I03343, A24783, A24782, A81878, AR022240, E12615, AR035193, A92133, E14304, A27396, AR027100, I28266, A49045, E16678, A82653, E16636, A93016, I06859,

				<p>I18371, I25027, I26929, I44515, I26928, I26930, I26927, A58525, I49890, I44516, AR000006, AR038762, E13740, A58526, A91753, A10361, AF156296, E06034, AF156294, A64081, A13038, A29289, A67220, AJ244004, U87250, AR029417, AR067733, AR029418, AR067734, AR017908, A98467, A84746, AR028672, AR038066, I50882, A68112, A68104, I62368, AR031488, I13521, I52048, I44531, A17115, A18079, D34614, I15353, AR028669, AR028668, AR028667, AR028670, I66495, I66494, I66498, I66497, I66496, I66486, I66487, A02712, X73004, A71440, I19516, Z96142, I13349, A71435, A60109, V00745, AF118808, AR036903, A07699, A97211, E08322, I74623, A11245, A02710, A07700, A13392, A13393, I19517, A76773, I21869, AF156303, AR008430, A22413, A35536, A35537, A02135, A04663, A02136, A04664, I01992, D28584, I08051, AB012117, A70040, A92636, E03165, E16590, A97155, E02221, E13364, E01614, I00079, Y11923, AR028564, AJ244005, AR035975, AR035974, AR035977, AR035976, AR035978, I00081, A98420, A98423, A98432, A98436, A98417, A98427, A83643, I01968, Y17188, AR066482, A13388, E00974, A02228, E00954, E00952, E00953, E00955, I08049, I43960, AR021440, I08776, A10360, E02679, E02104, E02098, A92666, E02001, E01718, E02003, E02102, E03550, E02096, A28163, E02100, E01997, A58998, E02291, E02292, E02293, E01999, E02396, E02327, E01563, E02431, E01693, E01696</p> <p>AI660957, AW361534, AW361532, AI802756, AW361521, AW361520, AW009763, AI660234, AI802693, AW361523, AI721275, AA581198, AW361522, AW361528, AA296955, AI721121, AA508854, AA297150, AW009764, D25727, AI687981, AI582072, AF127036, AF039400, AF095584, AB017156, AF039401, I95746</p>
341	HWLFF02	846384	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2853 of SEQ ID NO:341, b is an integer of</p>	



342	HEMF121	846750	<p>15 to 2867, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:341, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2117 of SEQ ID NO:342, b is an integer of 15 to 2131, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:342, and where b is greater than or equal to a + 14.</p>	<p>AI670810, AW195755, AI720056, AW268679, AI400941, AI867849, AA053882, AI672024, AI880208, AI682042, AW196438, AA034417, W27229, AW376127, AA425562, AA883340, AA132258, AI584045, AA770253, AW137059, AA132362, AA132257, AI655564, AA425357, T62545, AW243732, AI972198, AA491390, AI915665, AA721474, AA483037, AI269187, AA724043, AA346646, AW390324, N22655, AW377734, AC006042, AL078581</p>
343	HWLUW6 6	847289	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 545 of SEQ ID NO:343, b is an integer of 15 to 559, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:343, and where b is greater than or equal to a + 14.</p>	<p>AI092556, AW021242, AW020565, AW021073, AL023733</p>
344	HNTEG90	847598	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2609 of SEQ ID NO:344, b is an integer of</p>	<p>AI917905, AI936862, AI341481, AA148185, N63405, AI401201, AA053816, AI161242, AA648713, AI521663, AA451640, AI373082, AI934837, AI955673, AI420746, AA702928, AW070614, AW340072, AA613935, AI335655, AI521891, AA131526, W67613, W47344, AI690236, AA862821, AI800490, AA773815, AA973560, AI351678,</p>

			15 to 2623, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:344, and where b is greater than or equal to a + 14.	AI432990, AI304402, AW169727, AW169352, AI281292, AI571869, AA903920, AI870764, W47446, AA723363, N42756, N95695, W19932, AI280866, R69043, AA716384, AI418610, AA450233, AI088649, AW151043, AA659568, AA856650, AA354839, AA838632, R98511, AA564435, AA883437, R62372, AA679587, W67566, Z39058, AA782520, T97702, N58339, R79680, AI915144, AA613781, AA523988, AW137697, AA921709, R77082, H20304, R98467, AA885375, N77708, AW390950, F02414, AA709073, R79868, AW271580, AA035802, N32539, AA662580, AI954846, AW375866, N69750, H68853, AI283622, AA377701, AI159746, F06141, Z42939, AA131600, T97803, AA831300, AI393223, AA569597, T55707, AA883625, H43183, AI583936, AA083681, AL042667, AL042670, AL031597, Z84477, AF090094, AC002316, AF141325, AL079342, AC004686, AP000152, AC002477, AP000355, AC007384, AC009247, Z84487, AL031667, AC006211, Z68884, Z83840, AL121825, AL008710, AL050307, AF001552, AC005859, AC005529, AP000211, AC008101, AC005899, AC004408, AL031659, AP000563, AC005527, Z93023, AC005225, AL021394, AC007676, AC005602, AB022785, AP000133, AP000694, AF196779, AC005488, AL121655, AC007225, AC007172, AC005368, AC003668, AC007671, AF111168, AC006023, AC005088, AL133243, AC005280, AC004003, L78810, AP000032, Z82208, AC016027, AL031283, AP000113, AP000045, AC007227, AC007021, AL031774, Z93241, AC005829, AL031587, AL049874, AJ246003, AC006241, AC011311, AL117694, AL031433, AP001052
345	HELGG49	848119	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by	AL120348, W60947, AI889160, AW338051, AW183915, W79237, W20187, AA724916, W94601, N24965, AI025936, R72926, R78423, AW177212, AA113262, AA678912, AA134994, AW089742, W78175, AW176796,

			<p>the general formula of a-b, where a is any integer between 1 to 1829 of SEQ ID NO:345, b is an integer of 15 to 1843, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:345, and where b is greater than or equal to a + 14.</p>	<p>AW062704, W95179, AW387272, T96836, AW387269, T96835, AA135097, AW449740, AW178242, R51957, R78424, AI077762, R79882, AW176792, AI867344, R79787, R53624, N44777, AA983349, AA378399, AI274635, AA368087, N91033, AI866362, AW178250, AI590230, AW177211, AA385400, W32787, W60900, AA113408, AW387291, AI349482, AI687944, AI635016, AA804541, AW080157, AI673140, AI241923, AW083374, AI560569, AI866469, AI281825, AI473536, AI364167, AI499570, AI934011, R40363, AI638644, AI828239, AI290677, AI695726, AA641818, AW118311, AI828676, AI687127, AI915291, AW129264, AI813321, AI635851, AI274438, AI470717, AI590043, AI686601, AW089844, AI612750, AI479292, AW105296, AI613038, AI250282, AI524179, AW083572, AI679771, AI538564, H95782, AI580027, AI884318, AW103079, AI633125, AI744268, AI824688, AI419826, AI524626, AW152182, AI571439, AW238688, AW075382, AI678623, AI862024, AI636507, AI049733, AI863002, AI824458, AI701097, AW073677, AI636588, AI540354, AI568293, AI539690, AI670002, AI254731, AI282865, AI538566, AI536836, AI909697, W45039, AI670009, AI627893, AI521560, AI521005, AW105459, AW104141, AA811202, AA969375, AI866691, F37323, AW058304, AI887645, AA057833, AI138221, AI540831, AA765198, AI800648, AI698391, AW004606, AI370623, AI954475, AA743941, AI401697, AI768496, AW088691, AI582932, AI859932, AI619820, AI628325, AI434731, AI889189, AW079075, AI784214, AI632341, AI687809, AI582910, AW008226, AI872423, AI299035, AI683606, AI678446, AW151786, AW168452, AI584130, AW131294, AW198090, AI284484, AW078606,</p>
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346	HWLQO44	848746	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 870 of SEQ ID NO:346, b is an integer of 15 to 884, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:346, and where b is greater than or equal to a + 14.</p>	<p>AI491775, AL043355, AL117587, AL137533, L10730, AF118558, AF080068, X59812, A77033, A77035, AF183393, X78627, AR020905, AR038854, U66075, AF100752, I89947, I48978, I32738, U35846, A17115, A18079, L10724, X99971, AR034821, AL137550, D44497, AL137271, AF115410, E01314, AL080163, A52184, Z13966, AR060156, S82852, I48979, AL023657, A15345, X97332, A23327, AL137530, AL050138, X68560, Z97214, AL137463, AL137480, AF061981, AL110280, X52220, S75997, X69026, AL080159, A07588, AL117416, AL137716, AL050092, AL137641, AC007559, U52688, A58545, L25851, I33984</p>
347	HFEBT64	849084	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 377 of SEQ ID NO:347, b is an integer of 15 to 391, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:347, and where b is greater than</p>	<p>AW299468, AI432448, AI039818, AA237091, AI571337, AI963695, AI635374, AA932292, AW043706, AI302679, AA236679, AA767544, AI735388, AI590210, AI224546, AA234900, AI085872, AI632813, AI142800, AW002721, AI049665, AI269171, AW242940, AI741857, N68116, H05324, AA513076, R43971, R94225, AI653576, H24266, R97540, Z41226, N67392, AA991730, AA235171, N42646, AA303429, R94321, AP000010, AP000151, D87343</p> <p>AA229611, AL037646, H92426, F24939, AA913850, AA301789, F24173, AA863362, AA484317, F17383, AA552077, AA431836, AA187337, AA364844, F20283, AA935826, AI140872, AA505475, AL037267, AI720966, AA308185, F24109, AA729615, AA654953, AW183987, AI310754, AA745763, AW024998, AA514223, AA385387, F19519, AA505536, AA352591, AI081659, AA426364, AI749192, AW025393, AI206102, AI620973, W31741, AA431433, AA406595, AI357163, F24201, AA353193, AW009735, AA534308, AW089790, AA746620, AA936908, AA973773,</p>

348	HUVFL24	849114	or equal to $a + 14$ .	<p>AW276943, AI379642, AA737877, AA419110, AA568159, AA419068, AI040090, AA320647, AI143261, AA913396, AI224989, AF052490, N89555, AW001413, AA303971, AA923726, AA359518, F27960, AI312304, W04646, AI284631, AW182543, AI313081, R74226, N85911, AA659531, AA583874, AA188463, AI613388, AI583257, AI312446, AI613369, AA013065, AI525653, AI541056, AI541046, AB028624, D50371, M64751, AA933669</p> <p>AL048344, AI950115, AW172477, AW181913, AI983863, AA483410, AI680951, AI373684, AI679737, AI982807, AI702704, AI376630, AW364829, AW301257, AA577154, AI276100, AI392682, AI346228, AI755017, AI129655, AA483421, AI355958, AI377466, AI346226, AW243112, AA599194, AA291354, AI867449, AW192169, AI039401, AA993187, AI039363, AI347332, AW028446, AA195096, AW170760, AA088602, W94110, AI952683, AA903895, AI318372, N43002, AI281045, AI751662, AW029488, AI824484, AA483504, AI969610, N33340, AI751802, AW190927, AW195790, AW377484, W78793, AI219284, D79873, AI272316, H70517, R51140, T90487, H94989, R58836, T48112, AA131709, T27668, R51032, AI271684, AI954409, AA195292, H13623, AA317601, AA374263, T90583, H13622, AA151617, AA319878, N84168, AA374874, D58222, D58305, AW029016, R39161, D62479, T11374, AA375326, AL048345, T60972, AW364822, U12535, I57339</p>
349	HAMGR89	849143	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2526 of SEQ ID NO:348, b is an integer of 15 to 2540, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:348, and where b is greater than or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1912 of SEQ ID NO:349, b is an integer of</p>	<p>AI057104, AI924343, AW027047, AI346524, AW173054, AA262787, AA758013, AI224984, AI216119, AI037964, AA775452, AI243424, AA127640, AA917659, AA252367, AA554190, AA702120, AI075969, AA521393, AI912771, AI457766, AW003032, AI206978, AI498603, AI125226, AI351069, AA758629, AI333085,</p>

			15 to 1926, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:349, and where b is greater than or equal to a + 14.	AI274357, AA769280, AI971427, AA127754, AI208861, AW263206, AA975805, AA879117, AA641956, AI332498, AA907144, AI914212, AA252744, AA863367, AA988829, AI798139, AA421392, AI129237, AA418903, AI831664, N33561, AI762673, AA252422, AI439043, AI972006, AI682191, AA778723, AA236305, AI684356, H30712, AA913482, AA421289, AA426549, AW135660, N67782, AI281008, AA758704, AA470805, AW058119, AA806087, AI521486, AI268155, AA826129, AI243015, AA069144, H25266, AI076789, AA730016, W03584, H44413, H21786, N33856, AA256211, R88667, AA262880, H14303, AA036951, AI572244, H41955, H21785, AA775368, AA872501, AA069232, AI492089, AW351843, AI344111, AI015706, AW138103, AW003047, AA524866, AA036992, AI949929, AI380912, H26793, AA845748, H41912, AA877131, AI910782, R88668, AA770241, AI265766, AA884896, AA627474, AI110676, AA757230, AA758959, U05343, U05342, AC006011, AF003187, AF090892
350	HKLSA58	849155	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1219 of SEQ ID NO:350, b is an integer of 15 to 1233, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:350, and where b is greater than or equal to a + 14.	AI791848, AI733006, AI821607, AI749022, AI791402, AI688364, AI802646, AW339702, AI332718, AA911903, AI264549, AW135107, AA554298, T28152, AI630471, R93269, AI630620, R21092, AI630547, AI630304, AW376630, R93176, R46266, AW083254, AW376846, AI630112, AI630078, AI630378, M33987, X05014, L25082, L11621, L11622, I95751, S81738
351	HWLCG11	849159	Preferably excluded from the present invention are one or more polynucleotides comprising a	AA527591, C05803, AI304573, AI695136, C06042, C06062, AI833234, AA577615, AI281195, AI707997, AW360772, AA058357, AA058456, AI625936,

			<p>nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2496 of SEQ ID NO:351, b is an integer of 15 to 2510, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:351, and where b is greater than or equal to a + 14.</p>	AA327251, AW361899, T11144, AW388291, T27413, T29474, AW362727, AW376234, AI720037, AW360762, AW376475, AW376508, AA152037, C17238, AA316326, C17271, AW383505, AW383659, AA132781, AW377083, AW377034, AW383654, R80286, H71086, AW376560, R32538, AW383479, N48836, R32065, C17144, C18584, AA369133, AW375748, AW383465, AI475371, AL047042, AW375755, AW375758, AL040243, AL121365, R20927, R73953, AL121270, AL047763, AI521012, AI064830, R82602, AL045500, AW162071, AI349772, AW071417, AL119791, AI436456, AW301409, AI349645, AI275175, AI433976, AI433157, AI697137, AI687728, R25474, AI636456, AI868831, AW071349, AW103371, AI866780, AW274192, AW117882, AI635461, AI440239, AI285735, AI620284, AL135661, AI702406, AI564719, H02270, AI538716, AW074993, AI445432, AL036146, AI349004, AI250293, AI625079, AW268253, AI815383, AL119748, AI340582, AI349933, AL036396, AI349256, AI568870, AI863014, AI612913, X98311, L31792, AF006622, M18728, E01972, M18216, I08158, AC004558, AC005797, AC005392, D90064, M29541, M29540, X52378, M17303, M20881, M94891, M21822, AR044683, X17097, E03349, I08160, M25385, U18469, AC004654, D12502, I08169, AC004610, A43167, AC005238, I08161, J03858, I08156, I08157, M33664, AC005260, U18468, E01630, M15042, X16354, U18467, M17908, AF006623, E03351, I08159, A43165, M69176, M72238, D90312, D90313, E03352, E03350, AR052808, AR052807, AC004785, AC005791, D90311, A43169, X16455, AC004603, A39900, E01971, E03348, M22434, M34420, M37399, A23031, M23575, M37397, M34715, M20879, J04539, M33663, M93061, X16356, M22312, M33665, M30629, M33666, M31125, M76742, S59494,
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352	HMSJT69	849244	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2751 of SEQ ID NO:352, b is an integer of 15 to 2765, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:352, and where b is greater than or equal to a + 14.</p>	<p>M30628, M17082, M16234, U04349, M16337, AC002467, AC004559, M59256, M93705, AL096776, AF110325, I08155, I08165, M32624, M93701, L14724, M22311, I48979, AL110221, AF113690, AF090903</p> <p>AL138385, AW069288, AI628359, AI052134, AA432267, AI458075, AI476266, AA431256, AI360949, AI768605, AA890563, AA838729, AI262833, AI567507, AA890333, AI089644, AA194632, AI373864, AI745574, AI056436, AI095714, AI280712, AI290941, AA810651, AA418342, AW024465, AA410342, W20080, AI435811, AA397706, AA838326, AA860500, AI472025, AI275854, AA156454, AW243125, W76607, AI139528, AI985532, AA626087, AA209472, AA279471, AI858171, AI920804, AI197937, AA676504, AI632833, AW130827, W31803, AA993680, AA007279, AA564981, N32441, W72009, AI274286, N35912, AI439836, AI653447, AI554346, AA418300, AA435925, AI038657, AA969728, AW193440, AA651840, AI694970, AA165622, AI368697, AA810662, AA630452, AA476639, AA193407, AI587402, N48087, AI199987, AA649126, AA854457, AI492972, WI5321, H65871, N53285, AA780577, AI805624, AW194835, AI333349, AA194688, W04701, N25790, AW374110, AI539628, R83595, AA147583, AA757161, WI6998, N23736, Z24876, AA115096, AA406255, AA630461, AA165658, F01168, AW338576, R70844, AA649290, AA093709, R70817, AA302403, W19813, AA639258, N58849, Z24907, AA342107, F01095, AA300170, AA913741, F00181, AA193643, AA731459, H65872, AA312979, T35617, N75263, R70790, AA115095, AI245223, AA372937, AI520754, AI887615, R39487, AA375943, AA887983, AA629147, AA363098, AA709267, N91475, AA424959, AA480455, F00193, N84408, R29459, AI273015, AI928137,</p>
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	C00067, AA836506, N90014, AI556986, AA342108, R39488, AI590943, AI469280, AL138386, AI354609, AA211870, AA078889, AW087901, AW302965, AL048656, AI801152, N42321, AL036631, AI469532, AI933589, AL041150, AI932638, AW022636, AI537244, AI567582, AL120853, AI918449, AI872804, AI797908, AW162118, AL120254, AW050522, AI288050, AW161156, AI866465, AI973152, AA580663, AI274745, AW008353, AI254727, AW023338, AA613907, AA641818, AW059828, AI340603, AI345745, AW151136, AW022699, AI783504, AL040241, AL119836, AI340519, AI345608, AI859991, AI473451, AI610667, AI335426, AL041772, AI348777, AI345347, AI587121, AL036673, AI345471, AW161579, AL119863, AI623941, AI440239, AL036274, AI538342, AI580198, AI473536, AW129271, AI267502, AI312428, H89138, AA974049, AL045774, AL037454, AL038605, AW162189, AW020095, AI500061, AL119791, AI433157, AI702073, AI343091, AI801325, AI620284, AL047344, AL045349, AI537677, AW131139, AI697137, AI866770, AI343059, AI288285, AI699865, AI633125, AW023590, AR027227, AC006039, AC006254, M25757, AB021870, AB020203, DI3062, DI0373, I48978, Y11587, A08916, A08910, I89947, A08909, AF087943, AL110196, AL133568, AL137488, AF113694, AF183393, A08913, AL137529, AL133016, I48979, AL050393, X65873, AF097996, AF031147, AJ003118, S78214, AL117457, AF104032, A58524, A58523, E06743, AF069506, AR038854, I89931, Y11254, AL049382, AF145568, U91329, I49625, AL133010, AF079763, I30339, I30334, A08912, AL050172, AL133104, AL049283, AL110221, AL096744, AF177401, A03736, A08908, AF176651, E15569, AF113013, AF078844, AF119337, E02349,

AL137521, A65341, Z82022, AJ242859, AF026124,  
 U96683, I66342, X72889, AR011880, AF026816,  
 AF065135, AL137550, AF158248, U35846, AB019565,  
 AL117648, AR000496, AF113699, U39656, AL049314,  
 AF113691, E01614, E13364, AL080060, AF091084,  
 AF113019, A18777, AR038969, AF067728, AL080159,  
 AF132676, AF061836, E07108, AF090903, AL137705,  
 AL050092, AJ006417, AF111112, S61953, AF113690,  
 AJ000937, AL133080, AL049452, AF118090,  
 AL137271, AL050108, AL080137, AF090901,  
 AL050138, AF090934, E12747, X53587, AF162270,  
 AL137429, AF100931, Y16645, AF118094, AL122050,  
 AL117416, AF153205, I17544, AF090900, L31396,  
 AL133565, L31397, AF207750, X82434, AL133558,  
 AL049466, A77033, A77035, X62580, I46765,  
 AL117649, AL050149, AF125948, AL110225,  
 AF139986, AL137476, AL050277, AL137557, I33392,  
 AL133640, X84990, AL133075, A07647, AF067790,  
 AL117435, AL122121, AJ012755, AF061943, I68732,  
 AL080074, I09360, AL117583, X92070, AL137533,  
 AL122118, AF079765, X63574, I00734, U88966,  
 I89934, X81464, E03348, AF113689, AL133093,  
 AL137478, I42402, L30117, AL110197, AR059958,  
 AL117460, AF125949, E00617, E00717, E00778,  
 AL050146, AL117440, AL137656, S68736, AF185576,  
 AL050155, AL133072, AL133606, AF008439,  
 AL133560, E07361, AC002467, AL137556, AF017437,  
 AF090943, U67958, AL049430, I03321, AL133081,  
 AL122111, AL137459, AL133067, AL137538,  
 AF111849, A93350, AF017152, AL133665, AL050116,  
 S77771, AF090896, U80742, Y07905, AL137292,  
 AF106862, AF032666, AF081197, X98834, AF081195,  
 AL110218, A21103, AR013797, AB016226, AL049300,  
 S36676, AF057300, AL133557, AF057299, AL122100,  
 S79832, AF106657, X93495, L04504, AF022363,  
 X83508, AL137300, AL137480, AL050024, A08911,

353	HRABQ68	849254	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1741 of SEQ ID NO:353, b is an integer of 15 to 1755, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:353, and where b is greater than or equal to a + 14.</p>	<p>AL122110, AF113677          AI658942, AI073501, AA115117, H98127, AI806706, AW168242, AI655609, AI655984, AW274902, AW006899, AI885616, AI384005, AI862770, AI263856, AI805199, AI860971, W56482, AI927659, AI700992, AI478328, AA446933, AW005666, AI401220, AI002968, AI239846, AI991692, AW243427, AI431875, AI803408, AI934553, AW001841, AI888998, AW236761, AI095646, AI933307, AA515023, AI767611, AW052057, AA732809, AI767365, AA483834, W19503, AI335894, AI769598, AI469185, AI373940, W77850, N24889, W76349, AA830445, AA910254, AI566141, AA393040, AA479892, AA446405, AA494336, AA705715, AA446102, AI915890, W72066, AI350242, AA968989, AA114984, AA694343, AI253128, AI924901, AI459276, AA777527, AA677612, AI347431, AA705410, W23147, AI380860, AI200130, AI376116, AI768679, N89909, AI985312, AI525783, AI275869, AI351640, AA831584, AI267998, Z44422, AA428481, R81016, AA037021, H05027, AI474669, T65440, N30410, AI805668, AI016763, AI474756, F19207, H09217, AA026056, AI867151, H26914, AI247857, AW004768, H05026, F11974, AW299503, H09160, H89142, H51707, AA321265, AI194080, R22503, T65523, H84691, D57031, AA904940, F03518, R20788, AA412151, AI886333, AI470794, R22504, AI267943, N90505, N36309, AI191205, R20897, N69242, AI201656, N42442, R80813, W72126, AI370527, AI864366, AI565381, AI075116, AI474804, AI363797, D11903, AI362662, H28521, AA322013, AA319092, AI872426, D20588, AA683513          AI870516, AI800720, AI609383, AW081618, AI559974, AI884700, AI924507, AI554441, AL041032, AI860536, AW411215, AI354984, AI200963, AW090831, AW173652, AI355847,</p>
354	H2CBM53	849301	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by</p>	

<p>the general formula of a-b, where a is any integer between 1 to 1945 of SEQ ID NO:354, b is an integer of 15 to 1959, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:354, and where b is greater than or equal to a + 14.</p>	<p>AW193963, AI690567, AI671643, AW080817, AW439627, AW411216, AI523666, AW190138, AA460115, AI815168, AA628750, AW303677, AW273126, AA307760, AA588505, AW081271, AA461467, AI476314, AI590145, AI367650, W38689, AI186122, AW194684, N93223, AW337835, AW009877, AW328092, AA729034, AA758334, AI762486, AA973275, AA629564, AI128342, AA393056, AA768796, AW409782, AI160818, AI201801, AA630695, AI147630, AI364925, AW410398, AA594880, AI273645, AW304994, AA069681, AI150181, AW089774, AI168015, AA583096, AW402669, AI217443, AA516446, AW008046, AA418741, AA418796, AL079630, AA235099, AA234818, AI582401, AA190876, AI214413, AI275005, AA947504, AI049585, AW006655, AA665857, AI061312, AI341729, AA086389, AA182616, AI277727, AI084902, AA055467, AA632690, AA099209, AI368922, AI457245, W40557, AI276424, AI224401, W42773, AA808372, AW439176, AA112869, AI492863, AA134430, AA666010, AW088139, AA134431, AW173464, AA099223, W96211, AA079789, AI866892, AA226901, AW263957, AW328091, D53195, AA100024, AA533486, W42771, N78824, AW193163, AA306634, AA612645, AI630109, AA503354, AA306812, AI183509, AI940112, AA190845, AA384761, T78592, AA329920, AA182548, AA085082, W07253, AA887837, AA329653, N99955, D53990, AI940109, AI097159, AI866784, D56186, AW088872, AA263176, AI591373, AA056273, AA761535, T79067, AA227011, AW089525, T90687, AW374308, AW410397, AI871389, AI718948, AA860113, AW405415, AA112665, AA361589, AA338825, N52617, T90242, AA315239, AA199595, T28236, AA079676, AA412729, AA055555, AA112666, AI678334, AA670138, AA299212, AA088904,</p>

355	HPRTG34	849317	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1053 of SEQ ID NO:355, b is an integer of 15 to 1067, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:355, and where b is greater than or equal to a + 14.</p>	AA308250, AW078992, AA136478, AA352473, AI885977, AA622899, AI557920, AI472504, AA263021, AI926362, D19880, T16465, AA378252, AA748823, D56311, N85193, AW361343, AA626604, AW410391, AA055687, AA054667, AA083863, AA344435, W40555, AA358220, AW004936, W96304, AL045598, AA740422, AW368315, AI204321, AA083969, AI685692, AI273278, AI354992, X55362, E05957, M20372, M92441, M87223, J04791, M16982, S64539, M20617, M10624, AR042893, X64710, M12330, M33764, X16277, M34158, M81740, J02813, M31061, X16910, U36394, X07392, J03733, X07944, J04792, M12331, D16972, X53271, D28365 AL037564, AA453720, AA210900, H98015, AA843650, AI040004, AI220995, AI016091, AI435584, AI334212, W32177, AI192446, AI082214, AI399914, N44254, N35637, AI284980, W47143, AA134775, W93029, N36380, AA134774, W92984, AA700090, AA806713, H82499, AI800392, AA832323, W47192, N26526, W93135, W92918, AA375408, N35098, AA87117, AA871989, AA353433, N43841, AA872002, AW376122, D62615, AI582085, AA887456, AI868549, W32010, D62467, AA385192, AA447788, T26924, AA210901, T24867, N84003, N86900, AL036885, AA627889, W31385, I89947, AA872003, AA873883 AI246770, AI377933, AI761199, AI582622, AI819187, AW192622, AI762504, AI380444, AI123719, AA478657, AI126230, AI719024, AI921857, AI432426, AI022358, AI333183, AI810529, AI916005, AI884681, AI140905, AI343423, AI246424, AI250883, AI250885, AI200012, AW009851, AA181198, AA155749, AI332724, AI086038, AA856788, AI879585, AI879707, AI370881, AI347370, AI203506, AI360051, AA954858, AA970945, AW339115, AI081304, AI879202, AI280414, AI346236,
356	HE8DO31	849332	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1009 of SEQ ID NO:356, b is an integer of 15 to 1023, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:356, and where b is greater than</p>	AI246770, AI377933, AI761199, AI582622, AI819187, AW192622, AI762504, AI380444, AI123719, AA478657, AI126230, AI719024, AI921857, AI432426, AI022358, AI333183, AI810529, AI916005, AI884681, AI140905, AI343423, AI246424, AI250883, AI250885, AI200012, AW009851, AA181198, AA155749, AI332724, AI086038, AA856788, AI879585, AI879707, AI370881, AI347370, AI203506, AI360051, AA954858, AA970945, AW339115, AI081304, AI879202, AI280414, AI346236,

357	HAIDB85	849422	or equal to $a + 14$ .	AA847775, AA658469, AI086949, AA025436, AI400971, N27005, AA832161, AI202673, AI810468, AW083414, AI219951, W19276, AA468676, AA812273, AA479197, W47357, AA256365, AA327573, AA256364, AA147387, H41525, N40127, AI738810, AA357136, AWI35116, AW136509, AA364038, AA808931, AA187044, AI468337, AW044664, AI916117, AI698850, AI520913, AI768430, AI273687, AA535489, AI636213, H46492, R07159, W47356, AI885612, AA535798, AI498440, AA659491, AA327583, R07158, AA025435, AI928752, AA877568, AA053434, T25510, C02250, T26909, AA578776, D83198, Z60270  AI633566, AL035927, AW082315, AI285786, AL037767, AI708861, AI419414, AI284177, AW192459, AI151396, AA612739, AA134855, AI815685, AA689334, AA586813, AA968598, AA304835, AA626463, AA001819, W49728, AA626099, AA127695, AI149127, AI750750, AA724294, AA452323, AW19312, AA315574, AA173084, AI034293, AW239174, AA844519, AA082487, AA253375, AA081790, AA282163, D51303, AI208895, AA810675, AA720605, W04959, AW407689, AA644649, AA334603, R13836, AI366334, AI804247, AI264107, AA908291, AA102713, R86037, AA354729, AA131961, AA232457, AI383333, H06667, H12962, T81299, AA810674, AI377092, AA337127, W25665, AA196179, AA034964, Z21248, T54845, N39971, AA333529, T68528, AA356322, W00470, AA164635, AA644616, N42849, AA196152, X85724, AW365561, AA374119, AI284135, AI300595, AA164658, N53818, AA379168, T93858, AA242902, W01108, AI076637, AA083193, AI192401, AA242858, AI287983, AA232723, AA172366, AR000521, AL035071, U51196, U75920  AI421195, AI823602, AW007122, AI738743, AW075980, AI815121, AA576854, AA777517,
358	HMCIR67	849471	Preferably excluded from the present invention are one or more	

359	HKAJC79	849492	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2012 of SEQ ID NO:358, b is an integer of 15 to 2026, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:358, and where b is greater than or equal to a + 14.</p>	<p>AI033832, AI342602, AA536141, AI634282, AI202694, AI076677, AI057413, AA781616, AW297480, T50718, W92897, R48717, AA468674, AA533325, R48613, R93351, T50872, T27871, AI032233, AI419563, R76437, W92673, AI679196, AI948938, R76436, AI872272, R93352, AI424697, AI749473, M80647, M80646, L18868, D31798, D28773, L13128, AC004914, M74055, AC004961, S60133, AF107462, D34621, L36083, L36075, D34613, AC006021, D34625, L36087, U88978, L36086, D34624, L36081, D34619, D34623, L36082, L36085, D34620, U41333, L36079, D34617, L36076, L36078, D34616, D34614, L36084, D34622, U41329, D34618, L36080, D34615, L36077</p>
			<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1785 of SEQ ID NO:359, b is an integer of 15 to 1799, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:359, and where b is greater than or equal to a + 14.</p>	<p>AA742540, AI949524, AW009332, AI201176, AI768723, AA715094, AA831472, AW102922, AI499236, AI823609, AW261975, AW152666, AA457035, AI983270, AW418518, AW268358, AI672287, AI680566, AA877765, AA572955, AI937271, AA251282, AA126413, AA477257, AA668906, AW273880, AI985481, AA668840, AA890291, AA779485, AA632088, AA490994, AA934761, AA464997, AW152662, AA779468, AA491190, AI910978, AA719863, AA719844, AA814688, AI088595, AI864615, H98197, AA946609, AI201916, AA932316, AA621623, AA484077, AA743202, AI129689, AI142981, AA864712, AI368073, AA310074, AI079256, AA736521, AI434206, AA405892, AA736756, AA862664, AA772608, AA455277, AI022982, AA861894, AA975691, AA053973, AI089987, AI707806, AI150546, AA824433, AA774459, AA405768, AA010721, AA477905, AI148247, AA629311, AI087197, AA011168, AA554239, AA772485, AA251691, AA427464, AA932687, AI825437, AA877501, AI768582, AA779638, R77334, H99885,</p>

<p>AA456879, AA046249, T74509, AA865588, AA815149, T78289, H71005, AA019149, W52322, N55011, AI631616, H24844, H47049, AI934170, H58128, T07785, AA531525, AW129329, R66628, AI261961, AA991725, AA629053, H99921, AA531560, H21398, R38023, AI453401, AW002331, R69000, T91190, R77280, R09085, T24004, H58129, AA099598, F12475, H94358, T40435, H03006, AA483171, T28233, F00855, H75331, R83645, AA018371, AW379482, H61533, H01774, AI748829, R80893, AA922532, R16458, R16463, N78106, AA897541, R67959, AW195838, H75946, H70920, AA099604, R97163, H21444, R69001, R09086, W05189, AA578112, R66629, H01025, N28571, R38160, AA877775, H46510, T84698, AA046368, AA598492, D54847, H98196, AA035270, N77201, AA126538, N73849, AI439580, AI436620, AW364833, AA552980, R97162, AI630014, M74525, AC001479, X53251, U57690, X96859, M62388, M62387, AF144083, U04308, AC005354, U04306, U04303, U04304</p>				
<p>AA907128, AI017816, AW169350, W46974, R46497, AW449613, AW292741, AA531185, R41684, AA834533, AI075225, AW338342, H97931, AI813765, AA862837, AW058435, AA862832, AI635400, H71799, AI698932, AI832997, R41518, AI422989, AA190880, T16160, AA069733, AW023243, AA204873, AA743455, R98696, AA370347, AA806415, N71872, AW408592, D20034, AW296083, AL045327, AL045328, AL134524, AL134110, N73655, H62822, AL047163, AL037295, AL038838, AL037343, AI547295, AL042898, AL038983, AI142134, AL037436, AL037335, AL037323, AL037727, AL037443, AL038532, AL044125, AL041347, AL037435, AL038822, AL040193, AL044162, AL047012, AL043923, AL043814, AL040463, AL047170, AL041238, AL044186, AL044037, AL040617, AL043496,</p>	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 496 of SEQ ID NO:360, b is an integer of 15 to 510, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:360, and where b is greater than or equal to a + 14.</p>	849534	HCRMP14	360



	AL041635, AL040294, AL043845, AL044064, AL041459, AL041577, AL047219, AL038761, AL040625, AL045684, AL041752, AL043538, AL040621, AL046850, AL040768, AL046994, AL046914, AL040052, AL040464, AL040510, AL043467, AL043677, AL040839, AL043492, AL041602, AL044074, AL041730, AL041523, AL043627, AL041374, AL040576, AL043848, AL043570, AL047183, AL040472, AL045753, AL041324, AL040444, AL046442, AL041133, AL042135, AL045671, AL039316, AL041098, AL040322, AL038651, AL046392, AL041955, AL039360, AL039643, AL040119, AL044272, AL041096, AL044258, D29033, AL042096, AL041168, AL041163, AL041159, AL041246, AL045920, AL040148, AL047057, AL041296, AL040458, AL044187, AL041358, AL041086, AL041292, AL049018, AL045990, AL040571, AL041346, AL041142, AL040332, AL038745, AL045817, AL039338, AL079878, AL040075, AL079852, AL037341, AL040529, AL041197, AL041233, AL046330, AL044274, AL040745, AL040370, AL039432, AL040128, AL048677, AL044199, AL040553, AL047037, AL047036, AL040342, AL041186, AL040414, AL040149, AL038878, AL039744, AL041277, AL040285, AL040155, AL040091, AL044165, AL041131, AL043941, AL040090, AL037279, AL045989, AL041051, AL040168, AI318479, AL043775, AL041344, AL040253, AL041227, AL040082, AL045857, U46344, AI547291, AL040329, AL135012, AL041278, AL043444, AL048714, AL038024, AL047340, AL040263, AL042523, AL048657, AL045494, AL040238, AL040255, AL042468, AL045725, AL042420, AL045891, AL039915, AL043612, AL038040, AW363350, AL042655, AL038041,

361	HPRAO21	849565	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1073 of SEQ ID NO:361, b is an integer of 15 to 1087, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:361, and where b is greater than or equal to a + 14.</p>	<p>AI547258, AL042741, AL038463, AL043089, AL043321, AL046356, AL042488, AF052178, AJ238010, AR066494, AR064707, A93923, D17247, A93916, A93931, A85203, AL122101, AL133053, AL133074, AR023813, AL133049</p> <p>AI052135, AI890107, AI686770, AI963006, AI984506, AI961271, AA843515, AI220462, AI419384, AA885293, AI207618, AI963413, AI459597, AW025000, AA603448, AW363852, AI758891, AW392559, AA989465, AA503215, AI830067, AI034409, AA470621, AI673484, AI140068, AI040846, AI219825, AA864780, AI922639, AA933051, AI864888, AA865451, AA694072, AI146368, AA992845, N36326, AI493767, AA845369, AI278500, N32540, AI298514, AI000823, AI276994, AA781543, N29985, AW007592, AI354457, AW169756, N29254, AW192206, AA971940, AA938756, AW002816, AI270311, AI052332, AI660591, W44763, W17329, AA534770, AW380393, AA974319, H97778, AW023687, AI299161, AI300275, AI282801, AA729903, AW392564, N25177, AI872857, C75063, AW362058, N20541, T29041, H70688, AA828722, N91557, AW379047, H66828, AW392567, H72848, N68129, T62868, AI690659, N90163, AW151492, H88000, N93149, AI127148, H72404, AA341079, AW079633, AI818665, AW379016, N30761, AI570742, AA370668, AW379021, AI570730, N47849, W86859, H16104, R89407, D29131, AI459018, R21200, T58996, AA370507, AA724664, H15806, AW392560, AI872592, R89322, AI041668, N36044, AI420834, T59069, AA665915, W39110, AI932569, R76517, T62718, R76518, W02950, H90052, W19111, R22815, N85687, AW131986, AA345529, R21927, AA886259, N71586, AA366223, T25987, T11384, H88174, D29295, W38680, R22577, W73312, N32629, H66827, Z35415, Z13009</p>
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362	HAIBU93	849583	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2259 of SEQ ID NO:362, b is an integer of 15 to 2273, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:362, and where b is greater than or equal to a + 14.</p>	AA399232, AA214221, AA214177, AA459064, AI217132, AW339584, AA398082, AA442330, AW294203, AI917452, AW403072, AI220568, AA458874, AA193291, AW370558, AW370567, AA417244, AI761150, AA906703, C01285, W27419, AA810767, AI952624, R15252, T05960, AW105600, N50941, T15642, AA813317, AA992859, T35055, H15240, AA340392, AI016379, AI187986, AI798100, AA781802, AA379493, H15178, AW370622, AI783874, AA369389, AW370623, AA194237, T25074, AA808556, AI358612, AL041918, AW191003, I64695, AL031602, X70514, E01614, E13364
363	HCFMHS2	849589	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1834 of SEQ ID NO:363, b is an integer of 15 to 1848, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:363, and where b is greater than or equal to a + 14.</p>	AW392529, AI174700, AW392532, AI816050, AA173896, AL044183, N28894, AI276665, AA488136, AW235051, AA425206, AA173973, AA143588, AI088813, AI375591, AI682282, AA131957, AA552394, AI372077, AI815968, AI189556, AA131870, AA195221, AW405832, AI913758, H11682, AI160025, AI080684, AI274922, N42210, W31775, N56608, AA173540, AW006017, AA970729, AA173599, AI141364, N40261, AA769471, AA765730, AA143589, AA805505, D53701, AA835965, AA160875, AI128815, AW439438, AI358415, H73591, AW006016, AA101513, AA918239, AA085473, AA101590, W04674, AA975223, AI445105, N29653, AA766497, AA338102, H85230, H11594, AA354823, AI289645, AA356478, AA189014, AA429650, R85283, AW392524, AI565353, AA732660, AI942444, H98176, AA189015, AA825691, AW193155, AA159876, AA101512, AI620615, H73817, W25687, AA912092, AA356309, R34828, R84501, AW406393, AA373687, D60569, T24902, AA425651, H49162, T89376, AA432349, AW188489, AA813807, AI380128, AI471358, AA295075, Z21155, AW381345, T80058, AI827055, AI619999, AA256402, AA256194, AA503863, AI918437, AI358712, R58308, AL041924, AI282253, AI250821, AL110373, AL042694,

364	HMVAE41	849658	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1794 of SEQ ID NO:364, b is an integer of 15 to 1808, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:364, and where b is greater than or equal to a + 14.</p>	<p>AL045943, AI912496, AI274626, AI242505, AL042377, AA760655, AI691006, AB009282, AR052337, Y12517, X96392, AL031732, AC002416, AC005296, AP000152, AC018769, AC006203, AL031681, AC004832, AL031281, Z98036, AP000011, AC004797, AC002540, AL008735, AP000104, AC004554, AL034417, X78627, AC007390, AC005224, AL049557, AC004383, AC005585, AL030998, AC006222, AP000340, AP000344</p>
365	HMSDT39	849666	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1266 of SEQ ID NO:365, b is an integer of 15 to 1280, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:365, and where b is greater than or equal to a + 14.</p>	<p>AW300205, AI634862, AI636211, AW117753, N91173, AW168897, AA983273, AW002887, AI435122, AI674869, AI374834, AW081459, AW271351, AW237603, AI818463, AI025174, AI559577, AA758512, N48695, AI492924, AW168956, AA291263, AI476602, AA209287, AI953330, AI702174, AI590318, N29813, AA653205, AA908587, W19735, AI679742, AA255954, N49753, M86083, AI303020, AA148623, N89992, T31216, T16818, AW087559, N72208, AA642349, N45545, AL044337, W19616, AA256117, AI276869, N52681, T86722, N59844, N51450, AA319376, D61438, AW391658, W31671, AI702072, AI623267, AI692792, AI014575, AW151467, AW389355, D57869, N22895, AW449444, N55976, N90029, W17143, AF020762</p>
			<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1266 of SEQ ID NO:365, b is an integer of 15 to 1280, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:365, and where b is greater than or equal to a + 14.</p>	<p>AW009696, AI564501, AI338422, AI686931, AI830964, AW104148, AA627656, AW006174, AI680983, AW419082, AW103434, AA993858, AA522877, AI433080, AA617814, AA622024, AA554556, AA779573, AA570328, AA657985, AI469240, AW001139, AA743027, AA731026, AI376559, AA614745, AI683021, AI805646, AA564744, AW327272, AW189407, AA772612, AA552120, AA580117, AA922942, AI424857, AL047290, AW304111, AI820019, AA58092, AI160220, AA626035, AW328246, AW169771, AW328245, AW194365, N41032, AI934782, AA305951,</p>

AI565547, AI420886, AA541658, AA121148, AI282967, AI862584, AA935695, AI767434, AA732156, AI538727, R70257, AI367619, AI435015, AI695001, AI500534, AA463702, AW072210, AI681713, AA764755, AI261773, AA577037, AW270152, AA522789, AI209005, AI352465, AA993024, AW119091, AW005720, AA121128, AI470307, AA961169, AI628473, AA486942, AA632943, AA470737, AI652250, AI581601, AI915065, AI332465, AI770027, AI971332, T28946, AA306606, AI420057, AA935777, AA532671, AI631581, AI341401, AI829777, AI380770, R70307, AA486766, AI630939, H49082, H49164, AI208022, AA299673, AA532764, AA844602, N94413, AW384764, FI7865, AA985013, AA770317, AA663958, H45766, N47133, AA463764, R76630, AW276648, AI160446, AA764756, H45767, AW169784, AI633300, AI537643, AI800473, AI537677, AI873638, AI612057, AI345677, AI345688, AI927233, AI886594, AI653402, AI357644, AI866419, AW085373, AI560545, AI679261, AA580663, AI366985, AI628188, AI308035, AW268060, AW302973, AW079432, AW302073, AW169671, AI932739, AI318254, AI500113, AW191844, AW080076, AW081383, AI589428, AW051088, AI539781, AI249877, AI434242, AW148882, AI349646, AW082532, AI797794, AI587606, AW079334, AI633061, AI866691, AI358213, AI613471, AI318609, AI933992, AW268261, AW163834, AI915210, AW411412, AI309420, AW182790, AI348847, AW051727, AI886016, AI798271, AW088903, AI954721, AI250646, AA693331, AI569367, AI446023, AI888621, AI860697, AI357599, AA070889, AI539707, AW195943, AI144116, AI376376, AI289791, AW075382, AI138452, AI866919, H03560, AI612068, AI345787,				
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	AL043084, M94345, X54511, UI2026, AF199027, E03348, E03349, A45787, AF143957, A18777, AF205861, X59414, AF161699, U77594, S78214, I48978, AL137521, X82434, Y14314, AL050155, AB028451, M86826, U96683, U67958, U75604, X83544, S77771, I29004, X66417, AF113690, AF016271, AL050138, U36585, X83508, AR038854, AL133636, AF067420, AR029490, AL137555, X99717, I25049, A52563, AR012379, E12579, AF026008, AL110224, AJ012582, AL035407, AL137627, A07588, AF036941, Z13966, A08913, AL137574, Y13653, I89931, AF175903, A08912, U83172, A08910, AF055917, A08911, AC007390, I49625, A08909, AL117648, Y11435, L19437, AB026995, AF089818, AF132676, AF061836, AL049460, AF017152, AF158248, U62966, AC004383, AR016469, A08907, A08908, AF038847, S76508, AF114168, I89934, AL034417, AL049347, A32826, A32827, S61953, AF100931, AL049339, A65340, AL117583, AB007812, AF118558, U00686, I66342, AF040751, AL137254, AL133619, AR068466, AL117629, AR053103, A18788, Z98036, AF035161, AL137659, AF169154, AL137461, X84990, AF162270, I30339, I30334, AL049466, AF113691, AF022813, AL122111, X63162, E12580, I89947, AL137294, AC004213, AL022170, AR029580, S54890, Y11587, AL137478, AL117626, AL137271, AF155119, AF183393, AL137554, X57084, AL023657, AL096744, I25048, AF044323, AF151109, U80742, I32738, E01963, AL117432, AL133049, AL110280, AF012536, AF065135, A57389, I42402, L30117, S68736, AF004162, AL137665, U88966, AL031346, AF095901, AC004987, D55641, E12747, AF111112, A30330, A30331, A21103, AF000167, AF097996, AF067728, X87582, A65341, E05822, AF215669, X99257, I48979, AF162782, AL122106, L13297, AL117416, X55446, AR060156, AL080127, E07108,

366	HE8NK24	849679	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2124 of SEQ ID NO:366, b is an integer of 15 to 2138, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:366, and where b is greater than or equal to a + 14.</p>	<p>AL137705, AF030513, AR068182, AF098162, AF182215, X52128, AC002464, AC005291, AF016628, AL137300, A65965, AF017437, L10353, AF118064, A83556, AF061263, I33392, AL133099, I36502, AF061795, AF151685, AL133016, AF125948, AJ003118, AL137547, AL080137, A65943, AF106934, AL096751, AF085809, AL133606, U75370, AL137268, X99226, AL133623, I89944, AL034400, AC006112, AF148129, AR000496, U39656, AL050277, Z30970, AL137267, AL137556, AL137523, AL078630, E15582, AF134726, D83989, E04233</p>
367	HWHQP08	849741	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 3165 of SEQ ID NO:367, b is an integer of 15 to 3179, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:367, and where b is greater than or equal to a + 14.</p>	<p>AW000957, AI149682, N54552, AA677417, AI004751, AA922602, AW080433, AA508779, AI268652, AA836008, AW402796, AA720688, AA233670, AW193422, AW337371, AW302406, AW367620, AA233609, AA887284, AA081954, AA630594, AI190420, T55505, R07480, T55428, T10635, AI682187, AI264725, F03986, R07532, T97965, AW367619, AA384042, AW391626, AI620711, AW367850, AF042378, AJ003061, AJ003062, AF052663, L13801, L13800</p> <p>AW134989, W29043, AW137089, AA310151, AW137100, AA280092, AA652688, AI922824, AW292281, AI798823, AI986453, AI083672, AA489006, AI831941, AI383505, AI085344, AI356359, AA041528, R52438, AA030002, AA972328, AA524059, AI223070, AI580243, AA732474, AA825704, AI381602, AA252748, AA480915, AA028986, T17469, AW070405, AW102620, AA911995, T16192, AA805396, R52453, AA814395, AA749176, AA814416, AA721721, AW169884, AI953882, AI097342, T29132, N51775, AI289287, AI400795, AI383504, AW242681, AI351241, AA039904, AI972601, AA480859, AI372039, AI961141, AI916886, AI203089,</p>

AI061316, AA621468, AI702252, AA325608,  
AI638016, T77415, AA862644, T67229, AW194681,  
AA954305, AW408608, AI678021, AI289766,  
AW166565, AW243385, F09137, T17470, AI288152,  
AA262884, R39524, R40013, AI559481, AI208984,  
AI783861, AI636719, AI866127, AA848053,  
AI619716, AI932949, AI625464, AI473451,  
AI431909, AI859464, AI474107, AA911767,  
AW149925, AW243886, AI633125, AI539632,  
AI799199, AI670009, AI955906, AI799234,  
AA833760, AI624293, AI886206, AW087534,  
AI433157, AI702073, AI344785, AW163823,  
AA830821, AI868204, AI570807, AI470293,  
AW026882, AI927755, AW152182, AI568138,  
AL121037, AI873644, AI538564, AI567351,  
AL110306, AI499263, AI623363, AI929108,  
AI915291, AI884318, H42825, AI263331, AA640779,  
AW024889, AL046466, AI699011, AI340603,  
AI611348, AI624529, AI817552, AI654750,  
AW026610, AL037041, AI689420, AI073952, H89138,  
AI573026, AI364788, AL047100, AI308032,  
AI620868, AA614183, AI866002, AI697324,  
AW090498, AI924971, AI498579, AI566630,  
AI623682, AW075667, AA427700, AI805688,  
AL046990, AI648684, AI433021, AI915243,  
AA916372, AW089258, AI919345, AI698401,  
AI249877, AI699862, AI560171, AI537837,  
AA464646, AI468872, AW130863, AA603709,  
AW083804, AW059713, AI445992, AW088903,  
AI537677, AW088134, AI537244, AI590021,  
AI282355, AI439087, AI249962, AW089179,  
AI367210, AI610645, AI696819, AW129929,  
AI274769, AI590686, AI587606, AW151714,  
AI422985, AW129230, AW081255, AI277008,  
AI888621, AI696969, AA464027, AI242736,  
AI686554, AI686823, AI436644, AI680457,



	AI952302, AI288050, AI867042, AI539771, AI254727, AI569328, AI802542, AL048656, AI446124, AA983883, AI476077, AI251830, AI365256, AI635299, AI798303, AW085786, AW151729, N22406, AW265004, AA807088, AI280670, AW148716, AI280661, AI698427, AI436429, AW193203, AI537617, AI680498, AL041220, AI922577, AI802240, AI874151, AI471361, AW191844, AW162071, AI648567, AI701975, AW088899, AI648408, AI890628, AI613017, AI280689, AI366549, AF054997, A61088, AB022021, EI5569, AI2297, X92070, AL137526, I48978, AL122106, AL133113, AF104032, X80340, A08916, AL080060, AI8777, AB013464, AF118070, AL110280, AL080124, I89947, A08913, AF003737, A08912, U80742, A08910, E03348, I89931, A08909, AF090900, I49625, A08908, AF159615, AL137705, AR038854, AF119337, AL050024, AR019470, I66342, I42402, U58996, AF153205, Y09972, AJ242859, X65873, A03736, S68736, AF162270, AF051337, M86826, AL080074, AL080086, AL133645, AL117432, AL122111, AF106657, AF008439, AB019565, AL133104, AL049300, AL110196, Y10080, AF125949, AF079765, AJ006417, AL137300, AL133093, AL122050, AL049314, AL080127, X52128, AL133568, AL050092, AF057300, AF057299, AC002467, AF012536, AF113690, AL133565, AJ238278, AL122098, AF017152, U96683, AF158248, AF185576, E02221, I89934, I89944, S61953, L30117, Y11254, AL137556, AL133081, AL133557, AL133014, AL080137, X63574, S76508, I68732, AF067790, AF113694, AL133558, E04233, AL117583, I48979, AL117585, S78214, AR011880, I41145, AF090934, I126207, Y16645, AF118064, AF065135, AL133640, Z37987, AF118090, Z72491, AL137648, AL117460, AL117649, AJ003118, AL137294, AF061943,

368	HCRPJ23	849783	<p>AL137276, AF111112, U00763, X79812, AL133077, AL080158, L31396, AF090896, X93495, L31397, X53587, U72620, X63410, AF110329, X00861, AR038969, AL049466, AL049430, AB007812, AL117578, AF113676, U78525, AL050277, AF118094, I09360, E02349, X84990, AF061795, AF151685, AL049465, AL122118, X81464, AL122110, AL137429, AF113677, AL137557, X87582, E05822, U67958, X62580, I33392, AF132676, AF061836, AL110197, AL137538, U00686, A45787, AF040751, AF030513, AL137527, AL050138, I80064, AL049452, AF106862, AF000145, X98834, A93016, A08907, AF114170, AL137283, AF067728, X70685, AF079763, AF000301, AL050146, AL137656, AL117394, E06743, AL050393, AF061573, I00734, A08911, AL137539, A58524, AL137463, A58523, AF113019, AL122049, AF113689, Y11587, AL137478, AF051325, AL049382, AL080154, AF210052, AF183393, AF026124, A07647, AL110221, AL133665, S69510, AL050116, AL137712, AL122045, E00617, E00717, E00778, U49434, AL137658, AL137488, S79832, AL133010, U42766, AF113691, AF022363, AL137292, AF137367, A18788, AL049460, AF100931, AL133606, E02253, AR000496, AF113699, U39656, A90832, Y14314, AL133016, A08915, AF146568, U66274, AL122121, E12747, AF026816, AL133072, AB016226</p> <p>AI005359, AI694315, AI972612, AI082065, AL036211, AI754870, AW008284, AI753702, AA180902, AA453712, AW388278, AW021211, AA922030, N26071, AI288322, AA009423, W49749, W73146, AA614058, AI189484, AI445135, AI246036, AI186112, AI089442, W95921, AW378467, AI052141, AA973256, AA778174, AW081659, AA134129, W73174, AA595090, AW388639, AL036065, AA872130, AA009727, AI249673, AI089346, AW081295, AA152095, AI493759, AI696171, AI198768.</p>
			<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1812 of SEQ ID NO:368, b is an integer of 15 to 1826, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>

NO:368, and where b is greater than or equal to a + 14.	<p>           AI095592, AA988673, AW192264, AI360686,            AI075646, AI127970, AI476448, AI909705,            AW103076, AI921172, AA442058, AI983396,            AI038329, AW007632, AI015146, AW191944,            AI570803, W47165, W49665, AI623383, AW130296,            AI813857, AI565173, AW264689, AA932684,            AI890795, AI261258, AI889762, AI889623, W35237,            AW176280, AI566515, AI961919, AW069080,            AA026409, AA152021, AI567800, AI886097, N40433,            AI985741, AI623335, AI683566, AI623369,            AI598274, AI624600, AI676240, AI814850,            AI955731, AI858730, R58670, AI913077, AI678789,            AI870552, H27256, AI569941, AI870688, AW339093,            AI687790, AW192921, AI358146, AI445362,            AI436434, AA582996, AW439550, AW190961,            AW074180, AW020905, H50566, AW130924, AW190851,            AW190930, AW130861, C17793, AW130713, AI829567,            AA036658, AI916475, AA541427, AW190064,            AW192279, AI269867, C01855, AW316967, H62651,            AI583573, AA329660, H03678, AA570205, AW190004,            H97890, H50567, R36357, N30685, AW057827,            AI983667, AI476453, AI274588, AI561137,            AA441945, AI814955, AI282943, AA953589, H42353,            AI683009, AW242195, AW303685, AW276332, C15892,            AA405149, AI955758, W95922, N64264, AA868993,            AA033923, AI286292, AA405610, C16363, H62568,            AI470055, AA917644, AW104088, C18198, AI827141,            AI571657, AA328579, R64269, AI864163, AA368990,            AA298282, AA447781, AA328712, AI590011, R73008,            C02550, AW419142, AA852576, C16424, H54085,            AI933573, AA505508, AA361442, R89380, R73611,            AI499592, H43123, AI682596, AI273125, AI679681,            AA852577, AI679107, AA328516, H02311, AA295427,            AA297005, AW439074, H54084, AA360662, AI801321,            AA298288, AA298272, AA298216, AA722944,            AA358056, AA298090, AI926006, AA333978, W72242,         </p>
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AA369007, AW103312, AI583434, AI583035,  
AA888720, AA385234, AI758456, AA372254,  
AI868202, AA722767, R58323, AL037142, AI926090,  
AA330252, AW152009, W76087, AW103329, AA297765,  
AI824777, AA331081, AA361083, AA361157,  
AI932852, R25637, AW380002, C16588, AW338537,  
AI752974, AI561308, AI597986, AA298207,  
AW051093, H25313, AL048396, AI866075, AW192994,  
AI473604, AA010935, AA035657, U21128, U18728,  
AC007115, L11063, X84039, AF020292, S68736,  
Z82022, AL137533, AF111112, AL137271, AL096744,  
I48978, AL110225, U72620, I89947, A08910,  
A08909, AF097996, AL133113, AR038969, AL137523,  
AL050146, A08916, A08913, AL133031, AL137459,  
AL136842, AL080137, AL050149, I08319, AL122110,  
X79812, AL122098, AF106862, AL110196, AL137550,  
U91329, X65873, AL122121, I89931, AF090934,  
Y16645, AJ000937, AF087943, I33392, AF090903,  
AF118064, AL133560, I49625, AR038854, I48979,  
AL122123, AF158248, AF091084, A08908, AL080074,  
AL117435, AF113019, A77033, A77035, AL133075,  
AL133568, AF090901, AL133080, AF113699,  
AL133016, I09499, AF177401, AL133606, AF113694,  
AL137283, I26207, AL049314, AL117457, AF079765,  
L24896, X53587, S78214, AL137463, S61953,  
AF017437, AL133640, A08912, AF125948, I41145,  
AB019565, Y10655, AL122050, E07108, AJ006417,  
A58524, A58523, X82434, AF100931, AL122049,  
Y11254, AF111851, AF183393, AL080158, X92070,  
AL049466, AL117460, I92592, A91160, AL12297,  
X63574, X66417, AF118094, AL050024, U67958,  
AF051325, U02885, AL133557, AF126488, I03321,  
Z37987, AF090900, A14605, AF113676, AL122118,  
I29004, AF113677, AL080159, AL137560, AF069506,  
AL137648, AF125949, AF090896, AL133565,  
AF057300, AF057299, AL049464, A65341, AF118070,

369	HTOAC26	850211	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 825 of SEQ ID NO:369, b is an integer of 15 to 839, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:369, and where b is greater than or equal to a + 14.</p>	<p>AL137478, AR000496, X62580, AL049382, U39656, AF079763, Y09972, AL049452, U68387, AL050108, AL137658, U80742, AL122093, AL050393, U35846, U42766, AL110222, E02221, E15569, A93016, U00763, AL080086, AL133067, I00734, AF067728, E02349, AF210052, AL133098, AL137538, U68233, AF017152, AL080156, AL050116, AL133014, AF146568, AF061573, A18777, AL137556, AL050277, AL049938, AL049283, AF106827, I17767, I30339, I30334, E01614, E13364, AL137476, AF113013, AF162270, E03348, L13297, E05822, AL049430, AF153205, AB007812, AF026124, AL110221, U31501, AL117394, AL137294, AL133072, AF085809, A03736, AF104032, AL137479, X98834, I89934, AF119337, AL133104, L19437, I09360, AF031147, AL133081, I42402, AJ242859, AR059958, AJ238278, AL117585, I66342, AF106657, X57961, AF081197, AF081195, I68732, X72889, AR011880, AF003737, AF113690, AF090943, AL137557, AL133093, X70685, A07647, E08631, U66274, AL133077, R25957, R27018, R35985, R64157, R68317, H88594, H97065, W23782, AA026485, AA126576, AA257032, AA642773, AA642836, AA094426, AA216327, AA599579, T25001</p> <p>Z44246, AA053435, R56150, H67892, H13387, F12033, T65636, AW451795, R78086, T65661, W80585, AL133026, AC007406</p>
370	HUVCQ41	850254	<p>Preferably excluded from the</p>	<p>AL040881, AI139241, AI637855, AI290255,</p>

		<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2301 of SEQ ID NO:370, b is an integer of 15 to 2315, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:370, and where b is greater than or equal to a + 14.</p>	AA620401, AI126739, AA194023, AI128399, AI457095, AI479504, AW022180, AA854196, AI628702, AI146726, AI457402, AW237805, AA137220, AW243056, AA128469, W39694, AI093822, AI285858, AI804452, AI917541, AA482469, AI246264, C18060, AI678247, W19097, AA121936, AI884338, AA136193, AI824933, AA085549, AI039613, AI613131, AW173141, R81896, AI610844, AI867539, AL046066, AA235841, AW294375, AA296509, AA452887, AI242498, AA128329, R99534, AA101808, R81794, AA969044, AI356140, R99547, H04087, R62827, AI479480, R67319, AA360704, F00845, T94212, Z28653, AA194211, F00848, R66479, AA621305, R33374, AA581247, AA121935, AA426407, AI784040, AL079734, AL038842, AI675688, Z28650, AA515728, AA282951, T94123, AA832444, AA825827, AI633909, R23035, AA765925, AW304580, AI066646, AW243793, AL041894, AI620585, R62878, AW069227, AW327624, AA410788, AI783911, AA084609, AA502991, AA602906, AA904211, AI955029, AA706495, AA284247, AW021917, AA582554, R33375, AW188742, AA515048, AI679413, AA832175, AA563770, AI280266, AI654738, AI755202, AI357628, T74524, AI251591, AL042753, AI587349, AI471476, AI634187, AA228778, AW157731, AW275432, AI581486, AI434686, AA630854, AA493226, AA832145, AA715173, AI049534, AA056248, AA715075, AI754170, AW338021, AI457313, AA456924, W31597, AA487475, AA719073, T50061, AA534064, AA595770, AI963856, AA713705, AW265614, AW089950, AI056177, AA182731, F24728, AI669421, AA559166, AI369580, AI289505, AI744830, AW069412, AA809546, R99535, AA130647, AA121777, AA829036, AA483606, AA598927, AA829065, AI439393, AI792072, AI274011, AI431513, AW384449,
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				AA653612, AL037714, AI276298, AA527209, AA608667, AA570740, AI798407, AI758424, H54252, AA601674, AA668147, AA548886, AA568204, AI376239, AI912401, AI889579, AA127222, AI821881, AI267356, AI821918, R83708, AL048925, AW328000, AW419389, AA468196, AC005215, AC002996, AC005839, S42653, AL024508, M87914, Z95152, AC005288, AC003950, AL023096, AC002390, AL021453, AC005091, AC001226, AL121658, AC006430, AC005920, AC004148, AJ246003, AL031228, AC012384, AL121825, AL133500, AC007216, AC005011, AJ236701, AL022578, AL022313, AC002477, AC004703, AC005075, AL049563, Z97989, AC007327, AL031010, AC006966, AC009044, AC005256, Z95115, AC004701, AF155238, AC005922, Z97205, U07563, AF196971, AC002430, AC004849, AL121655, AC005516, AC000373, AC004972, AC007384, AL132777, AC009509, AC005756, AC020663, AC003119, AC007684, AL035633, AC004834, AC004638, AL049844, AC005632, AC002492, Z97630, AC003684, AC005015, AF111168, AP000696, AL049569, Z69917, AC006241, AC005694, AC002476, AC005630, AL135744, AL031230, AP000299, Z93017, AL031686, AL049570, AC004017, AL033521, AL049835, Z84467, AC003963, AF038458, AC005014, Y18000, AC005089, AC003991, AL009181, AC006597, AC004851, AL109952, AC005972, Z99495, AL031274, AC006346, AC008040, AC006061, AC004634, AL122023, AC002483, AC008044, AC003024, AC005529, AL117354, AL096818, AC007199, AL022322, Z85987, Z85996, AP000493, AC004878, AL121593, AC004098, AP000033, AC005527, AL022345, Z97353, AL030995, U17576, AL049843, AC009178, Z86090, AL031255, AP000116, AC004224, AC003098, AC002040, AF088219, AL035405, D87675, AC006537, AC005291,
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371	HPJEC66	850264	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2993 of SEQ ID NO:371, b is an integer of 15 to 3007, where both a and b</p>	<p>U91323, AC005071, AC004002, AL035422, AC006449, AC002375, AC005826, AC006468, AC007536, AL031589, AC004470, AF205588, AC005406, AL049872, AC005031, AC005768, AP000555, AC004841, AL096678, AC004987, Z98200, AC006084, AL078581, AL078584, AC005488, AL034420, AC000085, AC005081, AL035400, AL133355, AL008726, AC016831, AL135960, AJ131016, AL096701, AC005932, AC003663, AC006211, AC004644, AC003010, AL035551, AC000134, AC004675, AC004622, AL049766, AC007057, L78833, AC006387, AP000558, AP000102, AC006312, Z82201, AL096761, AF039907, AC003030, AL050318, AL117352, AC006379, AC005618, AC004815, AC004832, AC011592, AP000509, Z84487, AL049779, AL031293, AP000113, AP000045, AL031584, AC007204, AL034371, AC005366, Z83826, AC004460, U80017, AC007746, AC006019, AP000501, AL022336, AL049776, AC006285, AL109827, AL023494, AC004796, AC005736, AL080242, AP000566, AC002449, M89651, AC006962, AC005730, AL133371, AC006112, AC004125, AC003109, AL133448, AC002045, AC005480, AC004820, AC004655, AP000142, AL035587, AC004150, AC005900, AC007363, AL050341, AC007243, AL049636, Z94801, AL031286, AC005620, AC002347, T55205, R22930, R25360, R33340, R33341, N79795, N83477, AA453058, AA620384</p> <p>AL079713, AA019285, AW387766, AI393405, AA057866, AI150748, AW002060, AI285751, AI804383, AW362527, AW086498, W32465, AA019093, AA121087, AA192422, AA157309, Z44482, AA015928, AA353392, W19828, W96345, AA886352, AA015927, T77280, AA056991, AA059204, AA897284, AA059262, R68727, AA192527, N72977, N54833, T34590, H37766, H37839, AI902921, R32417, R34123,</p>
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372	HCQCD86	850273	correspond to the positions of nucleotide residues shown in SEQ ID NO:371, and where b is greater than or equal to a + 14.	R20036, AI684917, AA188354, Z42069, F05884, AI803047, W96344, AW135643, R32418, AI963424, H04412, Z38793, F01603, H01922, F03563, AI475203, AA356593, H38120, D19797, AI538533, H04434, AI267294, AW392791, AA568778, AF052088, Y17979, Y17977, Y17978, Y17976, E15725, D89289, AB025198, D86723, E14720, AL109847, AF038280, AF038281  R54166, Z43366, R42185, T30280, AW083132, AL031003
373	HCRMX05	850371	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 738 of SEQ ID NO:372, b is an integer of 15 to 752, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:372, and where b is greater than or equal to a + 14.	AI887746, AI473102, AB011166
374	HAPRB43	850859	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by	AI654147, AI810992, AI589186, AA910037, AA570707, AI765595, AW188411, AI806437, AI760065, AI890968, AA227446, AW237851, AI337043, AA922182, AA227501, AI050958,

375	HWHQL22	851066	<p>the general formula of a-b, where a is any integer between 1 to 1793 of SEQ ID NO:374, b is an integer of 15 to 1807, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:374, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1801 of SEQ ID NO:375, b is an integer of 15 to 1815, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:375, and where b is greater than or equal to a + 14.</p>	<p>AI283160, AA227513, AA226738, AI470530, AA226812, AA916642, T89323, AW152530, T89959, AA227372, N59841, T94622, T94623, N76372, AF124522, AC004456</p> <p>AW001408, AW025576, AI167306, AA421304, AW183595, N53420, AI884557, AI961482, AI366803, AI277353, AA905774, AI471722, AI208800, AI285232, AA917870, AI923048, AI002657, AW444453, AW072850, AI002663, AA995040, AI420232, T91710, Z44009, AA743874, AA768502, Z40060, AA421383, T91698, AI536628, AW197122, AA465719, F07259, T92932, AI222859, AW385033, T92460, T93049, AA780031, T92477, T89796, AI680633, T89430, AI078087, AI572783, F03531, AA465126, AA361777, R57124, AI417757, AI805839, AA808475, AA324494, AB033082, AF132479, AL035496</p>
376	HWLMN9 3	851217	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 536 of SEQ ID NO:376, b is an integer of 15 to 550, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:376, and where b is greater than or equal to a + 14.</p>	
377	HTGFW53	852170	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by</p>	<p>AI742968, AA102335, AI858272, AA587215, AA523335, AA573431, AI718039, AW294925, AI298302, AI290208, AA135360, AI719848, AA157727, AA122310, AA102312, AA101293, T08661,</p>

<p>the general formula of a-b, where a is any integer between 1 to 3188 of SEQ ID NO:377, b is an integer of 15 to 3202, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:377, and where b is greater than or equal to a + 14.</p>	<p>AA971633, N36169, H02342, AL048969, AA121086, AI279131, AA305313, AI420820, AL042905, AA524604, AA216644, AL042906, AL044340, AF034176, AA708751, W40578, AL048626, AI816537, AA081138, AA487475, W40576, AA122340, AI732911, AL120008, AI679002, AI791227, AL138265, AW406162, AI732327, AA177130, AL042539, AI744188, AI567674, AA126635, AA504951, AA224525, AA133332, AW401509, AA565585, N44159, AI815583, AI961232, C06151, AA831913, AL044339, AI204309, N23097, AA984258, AA601503, AL042282, AI310464, AW151102, AA492584, AA614180, AA908857, AW408643, AA640277, AL134669, AL079869, AI801141, AA525409, AA568314, AL046746, AI732128, AP000501, Z83843, AC004686, AP000694, AC005516, AL050307, AC002375, AC004491, AC005280, AC003029, Z86090, U91323, AL050318, AL022313, AC003688, AC004383, AF207550, AC005921, AC004813, AL022323, AC004638, AF196779, AL049869, AP000689, AC009247, AC005231, AC002544, AC002470, Z97054, U95739, Z95114, AC002347, AC007283, AC007227, AC008115, U63721, AC005225, AC007731, AC007242, AL034420, AC002477, AP000356, AC004685, AC005619, AC006449, AC007225, AC006965, AC005015, AC005519, AL133163, AL022336, AC005500, AC006344, AL031846, AC004755, AC002425, AP000008, AL139054, AC004796, AC005913, AL049830, AC004975, AC005696, AC004983, AC004851, AC007686, AC004448, AC005632, AL031255, D87675, AL080243, AL034417, AC002996, AP000704, AC005488, AC005004, AC005081, AC004887, AL133245, AL049760, AC005899, AC004223, AC004242, AC005480, AL049776, AC003982, AL096791, AL121754, AL049780, U91318, AC009509, AC005399, AP000115,</p>
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	AC005355, AF165926, AD000092, AC005730, AC005057, AC006241, AC005484, AC004024, AL049636, AC004821, AJ003147, AC003098, Z85986, AL035422, AC005722, AC007226, Z99716, Z85987, Z84466, AF129756, Z83826, AC005839, AC004754, AC005527, AF029308, Z83840, AJ246003, AL022163, AL121603, AC004099, AP000355, AL035086, AC000052, AC005694, AC006509, AC005058, AC002094, AC006251, Z95331, AC005412, AC005274, AL008582, AL035249, Z69705, AC007637, AL121653, AC005520, AL022165, AC004253, AP000555, AC006120, AP000359, AC003043, AC003963, AC004890, AF060568, U91326, AC006064, Z83844, AL031311, AL022316, AC004263, AC004883, AC005821, AC005874, AC005736, AF134471, AC007308, AC002563, AC007537, AC006014, AC005332, AC006211, Z98044, AC005264, AC004216, AC004230, AL020997, AC006511, AL022476, AC004895, AF095901, AP000212, AC007263, AC006121, U85195, AL022311, AC007899, AC005971, AL096701, AC006441, Z69920, AF038458, AC005844, AL079342, AC005037, AC005229, AC007160, AC005531, AL035587, Z82190, AC007541, AC006480, AL024498, AC006080, AC004662, AC004797, AL031767, AC004477, AC007688, U96629, AC004167, AL031291, AL031005, AL109963, AC002314, AC005291, AC007298, AC004884, AL049874, AC005578, AF196970, AC005726, AF024533, AL021154, AL021878, AC005102, AF053356, AC005529, AC005183, AC005060, AL109628, AP000031, AP000512, AC004408, AC002316, AL031848, U62293, AC005841, AC004760, Z69917, AP000215, AL031670, AF141325, AP000692, AL049538, AC006160, Y14768, AL049694, Z93244, AL021391, AC002465, AC004771, AC005378, AL031289, AC005189, AL133312, T63377, T94977,

378	HANGG89	852387	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2387 of SEQ ID NO:378, b is an integer of 15 to 2401, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:378, and where b is greater than or equal to a + 14.	AA137237, T10598 AI692182, AA477305, AI269928, AI264345, W88860, AI476206, H18309, AA479629, N30904, AI138307, AI343016, R42588, AI500167, AI928577, AA011427, AW139105, H47436, AI350196, AA962561, H65317, AA353763, AW193644, W88754, AI240815, H64403, AW243810, H64466, AA349069, H64452, H47347, R12712, AA011390, AI422579, R39766, H91585, H64415, AW292212, H90657, AI040619, AI681139, R39765, AL045327, AL045328, AL042898, U46344, AL046273, AL133049, AL133053
379	HKAAV86	852812	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 838 of SEQ ID NO:379, b is an integer of 15 to 852, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:379, and where b is greater than or equal to a + 14.	AI142133, AI125955, AA099589, AA099195, AA101877, AA098999, AL046448, AA173235, AA085237, AA082919, AA299705, AA094115, N85410, AA377177, AI243981, N86437, AW403324, AW190564, AA247123, R17416, R24302, H00147, R92806, AA071275, AI796920, AW364027, AA248454, AW402559, AI935862, AA704065, AI916342, AA666039, AA507485, AA040605, AI813926, AW197959, AW273696, AA995472, AI583116, AA731083, AA599966, AW197947, AI868832, AI872695, AW079296, AW263386, AW075345, AI869137, AI701204, AI158272, AI432491, AI910925, AA368305, AI699789, D45441, AW196035, AI640738, AI991740, AW242256, AI886146, D29593, AA527221, F04200, AI251134, AA652161, AA662355, AI269854, AA664813, AA308698, AA668557, AI753908, AA729385, AI753048, AA664425, AI872612, AA029483, AW078512, D57925, D57417, AI590007, AW078521, AW074413, AI590009, AA600264, D58570, AI933653, AW302381, AA576691, AI286321, AI631406, AW007954, AI537853, H89041, AA600096, AI754555, AI049522, AI583042, AI865956, AW069407, W46461, AW069439, AI678461,

			AA666041, AW338582, AA853499, AA853118, AW103316, AA852928, AW198176, AA485339, F02472, AA669375, AA853703, AI926802, AA599411, AW317014, AI475263, AA669968, AA852873, AI279645, AW152591, AI570071, AA853907, AI061306, AA304491, AA367577, AI624508, AW262800, AL047981, T17426, AI566448, AA670465, AI249329, AW078819, AI914427, AI151197, AA464848, AI247113, AW007968, AI432083, T40661, AI032132, AI624041, AI453768, AW028422, AW173650, AA770695, AI865924, AW075592, AW103304, AW129068, AW193455, AA728855, T29408, AA491991, AI445641, AI520770, AI609649, AI633323, AI246991, AI696877, AW131257, AI499176, AA693449, AI866877, AA376304, AI986291, AW338530, AI435209, AI435228, AW022946, AW242276, AW129074, AA587644, AI368933, AW003438, AI814772, AI891018, AA626904, AA904717, AI446504, AA368253, AA484039, AA946739, AA296453, AW020421, AA599880, R32764, AW074499, AI537174, AA715468, AI754222, AW068269, AA599396, AA599815, AI753152, AA564348, AI240449, AI583592, AW020521, AW020314, AW020233, AW023601, AA653329, AA782691, AA557448, AA598933, Y13286, DI3988, Y13298, AC006024, U07951, L36314, AF027361, X74401, AF076291, AF144713, Y13291, Y13287, Y13290, Y13288, Y13289, S80206, X02761, AI4133
380	HSACF33	853175	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2000 of SEQ ID NO:380, b is an integer of

		15 to 2014, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:380, and where b is greater than or equal to a + 14.	AI287600, AA393323, N76354, AA478577, AI131253, AW020489, AI879936, AA427956, R19770, AI147474, AI685853, H10460, AW009344, AI086648, AI274853, AI580474, AA830100, AW237044, R81911, AI572140, N23738, AW305082, AA627509, AA056315, H79313, H13001, AI872614, AI453789, AA570617, R70354, AA115794, R43355, H63824, AA370525, H79426, AA478712, AA492446, H72676, H28024, R78390, N43915, R78391, AA450037, W38531, AI086047, T28681, R23199, AA319158, N90080, AA903186, AA768142, AA374991, AW069635, R23200, AA342675, AA297604, R28598, Z38820, AW392736, R28390, AA371629, AI474240, N79382, AA622157, N54391, AJ230782, N46635, AI471187, R39618, AI659542, N32443, AA357539, R39562, H10459, AI990226, AL041375, N34906, R17637, AA584241, AW439703, H71678, AA846923, AA582554, AI915081, R99470, C01602, AW265688, AI521525, AW020150, AI537368, N75652, AI356440, AA639155, AA584489, AI053827, AA282951, AA679625, H30475, AI926102, AI984168, D26067, AC004883, AC005527, AC005529, AC004821, AL035458, AF196779, AL022316, AC000025, Z98051, AP000514, AC007298, AJ003147, AC005736, AC006501, AC004796, U95090, AC005046, AL121603, AC003029, AL035587, AC005104, AP000697, AL024507, AC005899, AC005216, AC005225, AF134726, AL008583, AC007551, AC005994, AC004805, AB023048, AC004139, AC005488, AC004974, AL049872, AC007376, AC005234, AC003085, AC004703, AL078581, AC005327, AC006597, Z98742, AP000030, AC005207, AL022320, AC004383, AP000503, U95742, AC006441, AC005291, AC000353, Z98884, AC007050, AC003043, AC004033, Z84469, AC004686, AC004750, AC004477, AL117694, AC004687, AC007051, AL109627, L78810, AL022319, AC002316, AL021546, AC006449, AF045555,
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	AC006211, AC005911, AC005295, AC006277, AP000133, AP000211, AC005480, AC004966, AL023803, AL008635, Z98036, L47234, AC007193, AC005971, AL096701, AC009247, AC005695, AC005288, AC016830, AL035659, AC007637, AL117258, AL034421, AC002302, AL008631, AC005081, AP000130, AP000208, AL032821, AC007207, AC006111, AC007563, Z82206, Z49258, AP000247, L44140, AL049757, AC005702, AL031659, U91323, AL109984, AC007216, AC007386, AC002288, AL035405, AC005519, AL096791, AC008044, AL031728, X87344, AF038458, AC002551, AP000088, AF024533, AC007546, Z86090, AC007262, AC004227, AL135744, Z99716, AC002375, AL133243, AC007057, AP000104, AC005015, AC007387, AL022302, AF111168, AL049748, Z98304, AC004887, AL031589, AP000140, AC005914, AC003684, AL035420, AL022722, AC020663, AC016025, Z99128, AL031729, AC005764, AC005778, AL080241, AC007860, AC005822, AP001051, AC005088, AC005740, AL080317, AL133448, AC006014, AC000159, AC006120, AL022165, AC007239, AP000501, AC005696, AL122020, AC006285, AL031427, AC007919, AC002310, AC003101, AC008394, AC006261, AC006071, AC006948, AF196972, AL109939, AC005921, AC007011, AC002128, AC007671, AC004605, AC002492, AL021155, AC006042, U29953, AC007021, AL031662, AL136295, AL109952, AL035407, AC007406, AL031228, AL133485, AL031229, AP000355, AL137705, AC005913, AC007030, AL049538, Z98745, AC006382, AC004699, AC006539, AC005023, AL034549, AL034379, AC007676, AF001550, AF095901, Z97053, AC004765, AC009510, AL117356, AF091512, U85195, AC006088, AC004964, AC007731, AC005815, AL034420, AC004878, AP000031, AC005786,



381	H2CBA56	853230	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 551 of SEQ ID NO:381, b is an integer of 15 to 565, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:381, and where b is greater than or equal to a + 14.</p>	AC006530, R81807, N53603, AA025818, AA503110 AA912711, AA313241, N59364, R71689, AA889755, AA907229, H44652, AW029538, AI693197, H43610, R54016, AI765349, C05901, R67625, T11836, AI432347, H28446, AI362187, W86722, AA514697, AA630422, AI417570, AI076503, AA725556, AA535222, AI268124, AI394393, AI765623, AI359512, AI421474, AI081785, AA573523, AW021552, AI954036, W86721, AW301490, AI311428, AW302896, AI366979, AI252741, AI251402, AI252170, AI308570, AW271149, AI254900, AI306074, AI252019, AI254903, AI334468, AI289701, AI744777, AW302995, AW301914, AI249305, AI345655, AI053639, AI144065, AI251387, AW302005, AI057136, AB002336 AI874228, AL048427, AI538564, AI627988, AI648567, AI567935, AI280670, AI539781, AI433976, AI274759, AW262042, AI872074, AI433157, AI554821, AW151136, AI608805, AI539771, AI537677, AI494201, AI500659, AI539800, AL045626, AI866465, AI815232, AI801325, AI500523, AI538850, AI582932, AI284517, AI923989, AI872423, AI500706, AI445237, AI491776, AW151138, AI521560, AI889189, AI500662, AW172723, AI284509, AI889168, AI440263, AI866573, AI633493, AI434256, AI866469, AI805769, AI434242, AI671642, AI888661, AI284513, AI888118, AI436429, AI859991, AI889147, AI355779, AI371228, AI581033, AI440252, AI866786, AI610557, AI860003, AI242736, AI887499, AI559957, AI521571, AL039390, AI829990, AL119457, AL042544, AL079960, AI538885, AI598061, AI745485, AL047422, AI539707, AL045500, AI620284, AI890907, AI828714, AI687375, AI371251, AI866510, AI923046,
382	HLJBL63	854063	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 117 of SEQ ID NO:382, b is an integer of 15 to 131, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:382, and where b is greater than or equal to a + 14.</p>	

AI500714, AI799199, AI491710, AI366900,  
AI828574, AI472566, AI863197, AI680457,  
AI640729, AW149878, AI251830, AI634251,  
AI273179, AI887775, AI590043, AI282268,  
AW197139, AI631057, AL079794, AL042551,  
AI866741, AW002174, AI564602, AI275175,  
AW089557, AI432666, AI499463, AI969567,  
AI863082, AI610362, AI537735, AI440239,  
AI521596, AI049851, AL042382, AI690946,  
AI583032, AW191003, AI537273, AI436456,  
AI371265, AI521005, AI963846, AI567940,  
AI610357, AI582912, AI817244, AI269862,  
AW080856, AI612913, AI866461, AI567993,  
AI355008, AI867042, AW104196, AI285826,  
AI863014, AI521594, AI499512, AI623736,  
AI889133, AL042787, AL042572, AI783861,  
AI863477, AL048375, AI610402, AI364788,  
AI434223, AW089572, AA603709, AI697243,  
AI610429, AI628850, AI469775, AI866820,  
AI433968, AI890806, AI476086, AI537187,  
AI539632, AI889148, AW118237, AL042377,  
AI539847, AI828583, AL042538, AI872300,  
AW172745, AI434741, AL042557, AI538878,  
AI354998, AI434274, AI567944, AI453248,  
AI805762, AA641818, AI432656, AI636719,  
AL040207, AL042365, AI285432, AL047187,  
AW083804, AL119319, AL119399, AI343059,  
AA715307, AA809974, AL046990, AI800152,  
AI349933, AI866608, AW129271, AI345253,  
AI799195, AW151979, AI612885, AA420758,  
AI566630, AI863191, AI610667, AI885949,  
AI270561, AI872051, AW059713, AL048323,  
AW152469, AA494167, AW192375, AI886022,  
AI612015, AL043168, AW084812, AI689420,  
AA830821, AI349598, AW168402, AW269097,  
AL046356, AL048377, AL041862, AA807088,

	AI680389, AI334930, AI569328, AI432644, AI636619, AA468418, AI537515, AI536910, AA761557, AI866457, AI343091, AI920782, AI309443, AI824375, AW131989, AI433037, AI866002, AI073952, AW080700, AW193134, U49434, Y11587, AC005057, AI8777, AL122049, AP000514, I48978, A08916, AL080060, I89947, A08913, I89931, A08912, A08910, I49625, A08909, AR038854, A08908, EI5569, AF113691, U77594, Y08769, AL133072, AF104032, AL122110, E04233, AL133080, AL133081, AL133077, AF081195, I89934, I89944, E07361, AR011880, AL137556, AF111112, A21103, AL133067, AF113689, E02253, U96683, AL117432, AF162270, A93016, AF003737, AF113690, X87582, E05822, AF132676, AL049382, AF061836, AL137538, M86826, X84990, AL117578, AL050149, AF113676, A45787, AL137705, AF030513, AL050138, AL137665, AL110280, A18788, AR038969, AL137526, AL133640, X80340, AL117583, AL117585, AF125949, AL133113, AL122123, X72889, U00763, I48979, I09360, AR000496, U39656, AF017152, AF158248, AL122121, AL080124, AL050277, AF012536, AF110329, AL080154, AR059958, U68233, I92592, AL080127, AL110222, AL137476, Y10655, AF119337, AF113019, AF100931, AF111851, AL122111, L30117, AL133557, AB007812, AF026124, AF000301, AL133016, AL117440, AF146568, AL137273, AL080137, AF113013, AL133565, E02221, AL137300, I68732, AL049464, AB019565, AF078844, AL133104, AL137429, AL137557, AL133093, AL049466, AR019470, X62580, AL049452, Z72491, A90832, I42402, AL133665, E07108, AL137712, I66342, S68736, S78214, AL137527, AL137294, AF000145, I00734, AL137479, A08911, AF026816, AL137463, S75997, AR020905, AF113694, AF091084, AF017437, AL137283, AF126247, AF113677, I96214, AR034830, AL137283, AF126247, AF113677, I96214, AR034830,

383	HHFOV83	854073	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2012 of SEQ ID NO:383, b is an integer of 15 to 2026, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:383, and where b is greater than or equal to a + 14.</p>	AL049300, AF118094, S36676, AF090943, AF097996, AL133558, Y11254, AL137478, AF051325, X70685, AL049314, M30514, AL137648, AL137459, AL133098, AF079763, AJ242859, AJ238278, AL117460, A07647, AL117457, AL050116, AL023657, AF125948, L31396, AL096744, E00617, E00717, E00778, U68387, AL050146, AL110225, AL117394, AL137488, A52563, AL122093, A12297, U42766, AL133606, L31397, X63574, AJ006417, AF061573, U91329, AF057300, AF057299, X96540, X98834, AF061943, A58524, A58523, AL080074, A08907, I26207, AL122021, AL049465, A08915, S79832, AF022363, AL080086, AF067790, E03348, I80064, E06743, Y10080, AL133014, AL122118, S76508, AF081197, AF090934, AF028823, L19437, X79812, A65341, U67958, AL080159, AF118090, AF210052, Z82022, AF183393, X52128, AL117649, X92070, AL110221, AL133075, AF061795, Y14314, AF151685, AF061981, U80742, U78525, AL080148, AL050092, X93495, AR068751, AL050366, X53587 AI147367, N38739, AI038362, AA306982, AI090692, AA430286, AI375057, AA832521, AW087382, AA481263, AA682491, AI816161, AI032742, AI271556, AI142375, AA772447, AI277932, AA861172, AW275861, W95514, AI310221, N21226, AI554585, AA622794, AI685388, AI094587, AI870769, AA161317, AA161269, AI828141, AI889952, AI138674, AI992250, AI093557, AA854451, W95748, AA528173, AA706459, AA922049, W92931, AI222782, AI087903, AI354769, AA010744, AI338847, AI573260, AA535258, AA829973, AI425087, AI127537, AI078189, AI860629, AA040606, N36785, AI312075, AI860618, N35545, AI818680, AI160456, AI188731, AW237244, AA927773, AA315522, N26495, AA418250, AI130937, AW026110, AI078700, W92930, AI189277, AI819131,
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AI308823, AA576681, AA402366, AA678068,  
 AI050690, AI150775, W07311, AA130641, AI356188,  
 AI992238, AA632439, AA398578, AI138868, N41577,  
 AI348234, AA725329, AA854444, AI494104,  
 AA102041, AI248913, AA861548, AI146539, N36042,  
 AA749246, AI623577, AA102040, AI309551,  
 AI193635, D80222, AI750505, W16594, AI335196,  
 AA973577, AI802773, AA579587, N40411, AI347895,  
 AI207319, N24916, AA757075, AW022051, AA004814,  
 W70099, AI494122, AA047417, AA435877, AA932173,  
 AI360040, N92468, W32858, W39316, AA443371,  
 AA725083, AI811596, AA151345, AA574227,  
 AA988481, AA553643, AA058890, T86893, W04849,  
 W07341, AA171485, AA350353, N79793, AA397537,  
 AI361500, AA767393, AA491049, AA039548,  
 AA171873, AA443799, AA130743, AA296477,  
 AA418371, AI039877, AI034158, AA350355,  
 AI346724, W30975, AA081842, W32412, AA826413,  
 AA485065, AA683191, AI750506, AA214656,  
 AI032235, T31993, AI690512, AA490864, AA972903,  
 AA875952, AI266157, N30803, AA441965, AI372476,  
 R44640, AA011170, AA412078, C14244, AI537215,  
 D51710, AA112658, D81672, T33576, T29959,  
 AA879091, R00040, AW372109, AA372522, N41552,  
 AA350354, W05591, AA296293, AI183719, AA737423,  
 T75529, Z32779, AW023311, H92492, AA011172,  
 AI280683, AA350672, AA293688, T30062, AA359611,  
 H90590, H88467, R89111, H01877, T30578,  
 AA554214, AI372475, AI085819, R23508, AA485161,  
 H58617, T31455, T30057, T30775, AA995219,  
 W01659, AI355187, H88466, AA021457, W02831,  
 W30907, AI066442, H92493, D80216, AA772519,  
 H87644, AA772663, T31230, T31445, AA084441,  
 AA746824, H58618, AA664067, AA223631, T35618,  
 T30506, N48376, D55832, T19529, AI816199,  
 W21185, AI498748, H71696, T35993, D55847,

				AA085298, AI826367, T31976, AA357765, AA047416, AA045501, H72258, AF068754, M84133, S38729, AL080074, AF210052, D44497, I41145, U72621, U61971, U61970, X68249, I48978, AL137561, AF104032, S70057, Z48796, AJ001838, AL137284, EI3998, U94316, X79812, X53587, AL133608, AF026124, AF161406, X83544, M64936, AF043642, AF072933, X61049, E00984, I04527, AL137476, I48979, AF106697, AF113676, AF008439, A76337, AL117626, AF114818, AF117959, AL137556, X60786, AF054988, Z72491, AL096750, AF081825, AF081197, AF081195, AF029728, AC004213, AL031281, AL137463, AR022283, X98066, AL050170, U70981, AB026995, U89906, AF030165, E12806, AL133053, AF047716, S69510, AF044323, AF040723, U75378, E15568, A57389, AC006115, X52128, AL137538, AF158248, AL137658, AF137367, AF169202, AF107018, AL096709, S75997, AF017437, AL049959, AF058921, AF004162, AL110269, AF113013, AL049423, AF060866, J05043, A58545, AF132979, X66113, T86892, T88768, R07813, R02519, H01878, H87645, N27504, N45945, N75568, N78599, W19455, W23893, W33125, W87569, AA021456, AA039549, AA055507, AA055508, AA063216, AA062641, AA081863, AA112657, AA149245, AA177032, AA483430, F16679, AA614547, AA714169, AA746127, AA746987, AA863434, N83598, N84074, C14243, AA090322, C15720, AA094953, AA095885, AA648733, AA725460, AA813664, AA974615, Z24858, Z28604, D20869
384	HMTAE04	854987	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1332 of	AI076832, AW055243, W67979, W68082, AA834993, AI857546, AA543028, AI131337, AI095504, AI200501, AI096393, AA629289, AW028678, AI050854, AI199116, AI199573, AA878778, AI024423, AW248926, AI298878, AI040156, AA040394, AI189654, AI537467, AI298968, W76354,

			SEQ ID NO:384, b is an integer of 15 to 1346, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:384, and where b is greater than or equal to a + 14.	R93490, AA749457, AW006223, W72385, R93491, T16004, AA861892, AA877821, AA699840, AA744576, AA033598, AI805225, AI830800, R98502, AA918052, AA033597, AA010392, AA612820, AA136046, AI468659, R98458, AA804806, AI079099, W00678, AA223489, AA010420, T16983, AA602907, AI695165, AI655482, AA971722, AA126657, N74666, AA203670, AA775379, AA040498, N69011, AA580962, AA743583, AI819009, W05037, AI679325, AW008460, AI222609, AA223599, AW249342, AI985521, N86961, U79569, U96448, AF033201
385	HWLNN76	855130	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 623 of SEQ ID NO:385, b is an integer of 15 to 637, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:385, and where b is greater than or equal to a + 14.	AI741418, AI250888, AI803956, AA405712, AI819932, AI275390, AI333992, AI857462, AI192862, AA258274, AI570928, AI342563, AI333503, AA142965, AI313372, AW195427, AA460652, AA480906, AI810213, AI278469, W86426, AA948327, AA885690, AI338420, AA234713, H91249, AI093456, AI214591, AL037358, AA635563, T78782, AA464811, AA236395, AI719169, T78399, H90341, T90933, AA150631, H90335, AW023940, AA431898, AI741922, T85819, AA234781, AA193260, AA903699, AA405960, AA348205, N74122, AI887868, AW362460, AI630327, AW236120, AW379776, AL049540
386	HDQFE56	856227	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 848 of SEQ ID NO:386, b is an integer of 15 to 862, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:386, and where b is greater than or equal to a + 14.	AA286732, AI191459, AA171434, AI355745, AA357190, AA285245, H10514, AA352837, AA338860, T97814, AF106941, Z11501, L14641, M91590
387	HLDBR21	856243	Preferably excluded from the	T70976, AI114496, R96283, AI478489, AA721678

388	HHAUD91	856354	<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 571 of SEQ ID NO:387, b is an integer of 15 to 585, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:387, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 577 of SEQ ID NO:388, b is an integer of 15 to 591, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:388, and where b is greater than or equal to a + 14.</p>	<p>AW249337, AA429219, H09067</p>	
389	HTOHA37	856923	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1082 of SEQ ID NO:389, b is an integer of 15 to 1096, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:389, and where b is greater than or equal to a + 14.</p>	<p>AA436974, AW301595, AI627769, AI148986, AW295167, AI095891, AI338889, AA228704, AW300645, AA938998, AW290959, AI584103, W51788, AA631562, T30453, AA593364, AA593259, D20778, AW148377, T19553, AI371361, AA228703, T19552, AW156939, AI696364, AF132951</p>	
390	HDP71	857684	<p>Preferably excluded from the</p>	<p>AI383479, AA314780, AA488893, H84254, T05979,</p>	



			present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 434 of SEQ ID NO:390, b is an integer of 15 to 448, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:390, and where b is greater than or equal to a + 14.	H84268, H86360, Z22452
391	HBBE52	857946	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1437 of SEQ ID NO:391, b is an integer of 15 to 1451, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:391, and where b is greater than or equal to a + 14.	AI174931, AA633248, AA307732, AW009694, AI708561, AI608859, AI912027, AW003654, AI147532, AW410500, AA703917, AI268422, AA315977, AA948335, AA714371, AI523863, AI799651, AI094601, AI653623, AI418474, N28523, N25832, AI678862, AA436086, AI969854, N50600, W15539, AW276307, AA176977, AA315741, AI573156, H99189, AI290689, AI022256, W31633, AA393190, N24472, AA665198, N25334, AI342932, AI350373, W46663, AA664456, W69947, N31447, AA315704, AI217012, AI299963, AW169034, AI269693, AA224139, W52454, AI350065, AW328643, AI149242, AI469902, AI146550, AW328744, AI280165, AI343905, AA115633, AW191988, AI274391, AA306451, AW273525, N50546, M78775, AA629016, W46572, R66807, W69946, AI276408, AA211672, AA528272, T35600, AI937658, R71434, T75448, AL037057, AA602926, H16018, H99844, AW194891, AA224140, AA843376, AL037133, AA879102, T77217, R32430, AI763096, T79893, H11074, AA313381, AA305608, AA740662, Z28524, AA384331, AA741428, AA729918, T36096, T32819, H43950, N50439, T74479, T77430, T36026, T85287, F13092, N50495, H11162, AL133741, R67905, AA640263, N74697, AA313248, Z45665, AA577403, W05751, AA308179,

T36097, Z28522, H99295, W05085, AA133390,  
AA435987, AA215662, AA948686, R27532, T32717,  
F10686, AA348310, R27490, T36025, AA650125,  
F18615, Z41336, AA782250, T74105, AA531601,  
D52493, AA628374, AI540601, C02982, T34250,  
AI222685, W52455, AA938476, T30776, T85497,  
AA834484, AA313624, AW368698, W37632, W37631,  
C01072, AA064863, AA369828, AA356358, AA301621,  
AA065121, C18586, AA650346, H43904, AA213943,  
N23667, AI304608, AA369829, AA676748, AA095424,  
R32429, AA215728, N75008, N47208, R37606,  
N84337, AA093943, N75908, AI025459, AA910321,  
W23851, AW089275, AW303089, AI364639, AI815855,  
AI358701, AW268067, AI858137, AI254727,  
AW162194, AI159837, AI432040, AW087842,  
AI539153, AW020419, AA287231, AI494201,  
AL119791, AI633125, AW073697, AA464027,  
AL041772, AI886192, AI348901, AI419650,  
AA493923, AI580190, AA464646, AI345688,  
AI824648, AI567802, AA761557, AW089405,  
AW074869, AL110306, AI888621, AI698391,  
AI929108, AW168031, AI917963, AI567582, R36271,  
AL037454, AL039086, AI445992, AI568138,  
AI445990, AW020095, AI921281, AL120254,  
AI889189, AI345745, AW151948, AI802654,  
AI312428, AI863191, AI250819, AL036403,  
AA908294, AI874166, AI364788, AW188840,  
AI434741, AI572717, AI918655, AI689420,  
AI433157, AI251830, AI288285, AL110233,  
AF145385, AF077034, AC004067, AC006023,  
AL023913, AL049830, AL122104, I48978, X63574,  
X65873, Z72491, I89947, AL133640, AF017152,  
AL050116, AI2297, E12747, AF100931, AL117649,  
A07647, AL137529, U35846, AI8777, A08916,  
A08910, AR038854, A08909, A65341, A08913,  
AF113690, AF118064, Z37987, I48979, I89931,

AL080154, AL137527, I49625, AR038969, A08908, I09499, AL050277, AF067790, AR013797, E04233, I33392, AR029490, AF118090, U91329, AL110196, Z82022, AL137550, AB007812, A08912, AL133565, X83508, AL137526, AL133077, AC002467, AL133080, AF079763, AL117440, I68732, AL080086, AL080137, AF008439, AF028823, AL133016, AL050092, AF162270, AJ000937, A77033, A77035, AL117578, A45787, AF146568, AL117432, E02221, E01614, E13364, AL137479, M92439, AF078844, AR020905, AF113694, AF067728, Y11587, X62580, AL049452, M30514, AL117583, AL133557, I66342, E15569, AL050155, AL122093, AL050393, AL110222, AL137521, AF017437, AL049466, AF065135, AF113699, AL133081, AF125948, S79832, AF022363, Y10655, E03348, AF113689, I80064, AL049283, I03321, AL137459, AR059958, U42766, AL133560, S61953, AL122110, AF113019, X82434, L19437, U49434, AL133093, AL137478, AL080159, L30117, AL080234, AL122098, AF026124, AL080127, AF061795, AF090903, Y14314, AF151685, AF061981, S68736, AL117435, X93495, AF104032, AF061943, X72889, AR011880, AB019565, A21103, AL133104, AL137283, AR000496, U39656, A90832, AL096744, AF177401, AL122118, U78525, AL080148, AL137548, AJ006417, AL122121, AL137476, A08911, I89934, I89944, X00861, AF113677, U67958, AL137560, E06743, AL137271, Y10080, E07108, AL049465, AL122045, AF185576, AF090896, AL117394, AL137705, A08907, AL049300, AF118070, AL133645, E02349, AJ238278, X92070, AF125949, U68387, S78214, AL133606, AL110171, AF090934, AF126247, Y16645, AF090943, I09360, AF097996, X87582, E05822, AL050024, Y11254, AR019470, X80340, AL137538, X84990, AL133075, Y09972, AL117457, AF106657, AL133113, U72620, A18788, AL080124,			
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392	HLTDR01	858166	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1411 of SEQ ID NO:392, b is an integer of 15 to 1425, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:392, and where b is greater than or equal to a + 14.</p>	<p>AL080074, AL122049, I26207, AL122050, X70685, U58996, AL133098, M86826, AF017790, AL080158, AL050149, AL133014, AL137273, A03736, X96540, AL137300, X98834, AL137463, X81464, AF111112, I41145, AL080060, AL137429, AL137556, S36676, AF132676, AF061836, AL122111, AF210052, X52128, U96683, U87620, AF113676, AF158248, A08915, AL133568, U80742, AF030513</p> <p>AW385859, AA419101, AI290315, AI041588, AW390662, AW385843, T75225, H08027, R83777, AA216462, H61773, R71821, AW384937, M78650, F12858, R28101, N23532, AA504182</p>
393	HMECD30	858178	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 4741 of SEQ ID NO:393, b is an integer of 15 to 4755, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:393, and where b is greater than or equal to a + 14.</p>	<p>AI984818, AI568216, AI564107, AA805698, AI681685, AI827106, AA053800, AA938489, AW007101, N25989, AI693621, AI561244, AI144484, AW151585, AI697886, N98566, AW272292, AI096959, AI681003, AA034070, AA827882, AW014483, AA630414, AA824356, AI336871, AA316109, AA648440, AI074830, AI089429, AI362242, AI366697, AI089558, AI075238, AI207943, AA830124, AA736466, AI478810, AA996033, AI685187, AI742045, W96064, AI681016, AI580772, T33918, AI024936, AW028751, AA434099, AI827165, AW300086, AA889968, AW008314, AI265917, AI984561, AA877742, AW003114, N35170, AA987322, AW022441, AA910763, AA243491, AI124025, AI765070, AA884677, AI056620, AI359910, AW351871, AI052381, W81311, AA844185, AA603787,</p>

	AI651435, AW016871, AI571393, AA476546, AI304722, AA889289, AI333701, AA044294, AA243428, W40468, T16097, AA970544, AW273026, AI806170, W24250, AA111852, AI362559, W60148, W74747, AA035786, AA725619, AI243167, AI522223, AI808805, AA434369, W81312, AI253071, AA808307, AI683788, R37482, AI650388, AI004291, AI344142, AA101154, AI935966, AI669651, AI186913, AI948923, AI860153, AI298579, AA996292, AI702113, AA531191, AA078922, Z43542, H08503, T64586, AI866869, D58796, W94092, W51938, AA349176, AA483674, AW192524, AA085939, AI309315, N93966, AA196255, W96065, AI202403, AA085511, R62988, AA640172, T50714, AI961628, AA376655, AI435333, W74564, AA814014, AA894595, AA768212, R76156, Z39612, AW151282, AA452689, AA977443, N35597, T49840, H96905, AI698533, AA767590, AI568701, T31524, AA978243, AA370930, AA375488, AI520828, AW103242, T76968, AI880190, R84695, AI525356, AI124977, Z25324, AA658431, H08779, AA262315, AA916166, AA341762, AW015466, R22469, AA829960, AA719815, AA196153, Z45549, AA319607, R78025, R63044, T77132, T85963, R56667, T71935, AW193938, AW104224, F04406, H87982, R26846, AA357282, R79650, T35601, N88359, AA304242, AA233389, AA360722, AA375734, T71928, AA112488, T87634, AI598215, AI910242, T35305, AA380126, AA809949, T35899, R78206, AA938355, AA044121, AW418632, AA355637, T49839, R77020, AI185564, R22419, R73107, R79843, AW007935, R73106, AA344789, AI870082, AA328125, R56830, AI925827, AA369142, N55924, AA325755, AA845757, N36620, AI581578, AA079040, AA927705, R27075, AA879187, AI382558, AA094562, H88162, AA033955, AA476441, AI024882, AI203133, R14199, AI686151, R77924, AA471369, T50868, AA917320,

394	HDPII40	858606	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 3025 of SEQ ID NO:394, b is an integer of 15 to 3039, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:394, and where b is greater than or equal to a + 14.</p>	<p>C21159, W94155, W21472, D25555, AA112421, D80005, AF055017, AA730233, AA096006, AI023497, AI088305</p> <p>AI923220, AW271504, N36059, AW243442, AI804888, AW271637, AI650826, AI921747, AW103424, AW076096, AI392784, AI807747, AA633209, AA604757, AW418987, AW242326, AI925261, AW014203, AI819108, AW131363, N33223, AI524472, AI953896, AI126250, AI694687, AI700209, N33824, N21567, AA731730, AA577191, R52426, AI559108, N30972, AI990562, N35579, N25189, AW087660, AA743389, N24947, AI339587, R23308, AI376459, AA742979, N27426, AA954281, T26975, AI801129, AI245517, AI125720, AI701246, N41938, AI640713, AI636147, AW087669, H97662, AI243263, H29641, AI572028, Z46022, H29640, AI983198, AI270534, H99399, Z42169, AI521060, R82562, N34709, AA373475, AA319637, T34245, W20047, R23233, D78710, H29549, AI741908, AA833897, AI369988, Z41637, H29548, AI367191, F01708, AA659275, AI246035, AI219239, AI221561, AI273738, AI281168, AI685342, AB007962</p> <p>AW069232, AI125648, AI624424, AW390456, AW377272, AL047050, AL135473, AW338313, AA314599, AW338408, AW058395, AW377235, CI7248, AA506729, AI801062, AW304244, AA584283, H59230, AI801229, AI267419, AW029190, W47561, AW264141, AW377245, AA148299, W47533, AI866710, H11999, AI499571, AA863211, D57803, AA065135, N84947, AW377244, AW390448, AW028866, AI498663, AI590030, R71267, T29061, AA853771, AW368416, AA528429, N84933, R31348, AA363627, AA373320, H59231, AA166816, AI383616, AI445574, T19196, AW151348, AA064837, D45617, AI557751, U41766, D14665, U41765, A66534, AF069646, AF069647</p> <p>AI582192, AI829668, AW022694, AI348001,</p>
395	HDPGS38	858894	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 3262 of SEQ ID NO:395, b is an integer of 15 to 3276, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:395, and where b is greater than or equal to a + 14.</p>	
396	HCQAM69	858949	<p>Preferably excluded from the</p>	

			<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1618 of SEQ ID NO:396, b is an integer of 15 to 1632, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:396, and where b is greater than or equal to a + 14.</p>	<p>AW073884, AI745128, AI871836, AA976209, AW088315, AW191943, AI431312, AA476876, AA454936, AA708622, AI218146, AI336748, AI189368, AI246200, AI241674, AI969411, AA716347, AA447277, N79335</p>
397	HOSNCI5	858958	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 794 of SEQ ID NO:397, b is an integer of 15 to 808, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:397, and where b is greater than or equal to a + 14.</p>	<p>AA843533, AI692783, AI769103, AI479234, AI346969, AI332623, AI560964, AA406642, AW071704, AA707195, AI431301, AI218736, AI961161, AI989624, AA765123, AA180333, AI500253, AW008413, AI473781, AI281064, AI149261, AI253097, AI912120, AI692780, AI262308, AI266734, AA227960, AA923774, R60069, AI034302, N67562, AI925794, AI352401, AA862001, AI869528, AI221573, H94353, AI565227, C21540, AA249165, C14331, D80166, D59859, D59619, D80210, D80240, AA305409, C14429, D80219, C14389, D80164, D81030, D80212, D51799, D51423, D80253, D80195, C14014, D58283, D80022, D80188, D80391, D59787, D59502, AA514186, D59467, D59275, D80043, D80227, D51060, D57483, D81026, D59610, D80366, D80196, D80024, D59889, C15076, D59927, AA305578, D80269, D80045, D80038, D80193, D80133, D51022, D80248, D50979, D50995, AA514188, D80251, D80241, AW360811, D80378, D80522, AW177440, AW178893, D80439, AW375405, AW377676, D80268, C05695, T03269, C75259, AW179328, AW366296, AW377671, AW360844, AW360817, AW375406, AW378534, D80302, AW179332, AW377672, AW179023, AW178905, AW378532, D80247, AW177501, AW177511, D59373, AW352171, AW352170,</p>

AW177731, C14407, AW178907, D80134, AW178906,  
AW178762, AW179019, AW179024, D80132, D58253,  
D51250, AW177505, AA809122, AW360841, AW179020,  
AW178775, D80157, AW178909, AW177456, AW179329,  
D80949, AW178980, AW177733, AW378528, AW369651,  
AW178908, AW178754, AW179018, AW352158, D51103,  
AW352117, AW176467, AI557751, AW352174, D51759,  
AW179004, C14298, AW179012, AW367967, D59695,  
AW178914, AW378525, D51079, D81111, F13647,  
T11417, D80064, D59653, AI910186, D58246,  
AW177728, Z21582, D80168, AW179009, AW178774,  
AW178911, AW378543, AW177722, AW352163,  
AW178983, C14227, T48593, AI905856, C06015,  
AW178781, D59503, AW352120, D45260, C14077,  
C14344, AW360834, D58101, D59627, AW177723,  
AW378540, H67866, AI535686, H67854, D80258,  
D80228, AW367950, C03092, AI525923, AW378533,  
N66429, D45273, AW177508, AI535850, D51221,  
AA285331, AI525917, AW178986, D51097, D51213,  
AW177497, D59474, T03116, AI525920, D59317,  
D80014, C14973, AW177734, AA514184, D59551,  
C14957, D60010, AI535961, A62298, A84916,  
A62300, AR018138, Y17188, AR008278, AB028859,  
AJ132110, AF058696, A82595, X82626, A30438,  
X67155, D26022, Y12724, A25909, A67220, D89785,  
A78862, D34614, AR060385, A94995, AB002449,  
D88547, AR008443, Y17187, AR008277, AR008281,  
I50126, I50132, I50128, I50133, A26615,  
AR052274, AR025207, AR066488, AR016514,  
AR060138, A45456, X68127, U46128, AR016691,  
AR016690, Y09669, A43192, A43190, AR038669,  
AR066490, AR066487, U79457, I14842, I18367,  
AR054175, D50010, A63261, AB012117, AR008408,  
AR062872, A70867, A85396, D88507, AR066482,  
A44171, A85477, D13509, I19525, A64136, A68321,  
A86792, AR060133, I79511, X93549, AF123263,



398	HHEJQ41	859171	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2414 of SEQ ID NO:398, b is an integer of 15 to 2428, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:398, and where b is greater than or equal to a + 14.</p>	AR032065, X72378, AR008382, D20653 AI085594, AI979021, AI888200, AI888205, AW001578, AA411613, AA235006, AL045223, AW444436, AI453775, AA976885, AI554850, AI744678, AI473648, AA432198, AA411193, AA856575, AI240381, N53228, AA902517, AA633556, AA732554, AA398095, N73775, AI280676, W03922, AA693813, D81541, H57533, AI269162, AI050698, AI093710, AA872982, AA233692, AA257980, D81376, AA985398, H72479, T28972, AI378463, AI278448, D61024, D80871, AA356813, H72158, AI572718, AW021225, AA381648, R71379, AA399573, H15501, AI536017, AI291594, AI690015, AA381354, AI805984, AA768658, T79641, AA579383, R31158, AI872714, T80069, AA381995, N66352, T80891, AA236265, T79727, T70314, AA321074, AA295261, AI619790, AA454520, AW388020, AI582180, D87742, L34688, U35730
399	HTXMR51	859352	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2718 of SEQ ID NO:399, b is an integer of 15 to 2732, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:399, and where b is greater than or equal to a + 14.</p>	AW363446, AI768639, AW393582, AW069238, AA151805, AI302102, AI359022, W72706, AA167429, AI832676, AA534996, AA115174, AI829074, AI870640, AI752265, AI829963, AW022975, AA582822, AA191555, N25968, W63569, AW192674, AI769388, AI418471, AA992113, AW188331, AI816897, AA131045, AW088562, AI685393, AI458130, AI434065, W44478, AA311020, AA126150, AA845374, AA166828, AI422242, AW183765, AW009816, AL120940, AI719342, AA130707, AA167430, AA843760, AA948026, AA644539, AA398996, AA558422, AA661630, AI539659, AA927865, AI742544, AA143536, AI820088, AA305513, AI815029, AW102901, AA725804, N25600, AA864619, AA405085, AA503401, AI129577, N33792, AW385446, AI609769, AI685398, H99319, H09563, AA412702, AI245353, AI632835, AW403447, AI359809, AI214594, N29003, AA151703, AI199980,

	R19741, AA578597, W60512, AW275274, AI423339, N23217, N28799, AI433553, AA399590, T32456, AA113239, AI224550, W43020, AI301295, N69429, C06159, N20135, AI110878, H28875, W42768, H80208, N30029, W43024, N20632, AI041497, N28791, AI023104, AW402233, W77945, AI335353, AA209228, AA305280, AI826788, AW236394, W27707, AA683390, AI342826, W27341, W26189, H96883, H99165, AI752266, AA004530, C06009, AW377536, AA704311, AW021532, AW023135, AA854663, AI121186, AA903459, AA533596, H94852, AA171726, D82543, AW238387, AI274027, N28783, AI866370, W27016, AW265015, N68824, AI559943, R23541, AA311653, AI267623, AA962407, AA526754, C18645, AI267718, D82488, H63616, AI224548, AW136170, AW263407, H12905, W43025, W02651, AA758158, N28767, AI025877, W26304, AI026008, AA004531, AA400249, AA297602, C06105, AA171916, AA857896, C14639, AW244099, AW296975, H11623, AA872095, AA143786, W42769, AA132405, H62867, AA582670, C74987, N37003, N90094, AI283942, AA115891, AI039558, AI022053, AA211911, AW361776, AA442767, T19100, AA913247, N30039, AI023176, AI721077, T28136, AI700275, N26423, AI368394, AA588514, H94909, AI864587, N67089, AI365397, AI299400, N80147, N81159, W28282, F12975, AA429756, R61550, H27750, R61604, C06136, F10573, AI581154, R53662, D61291, N22263, AI687776, AI268504, AW377411, T78753, AA132404, T31614, AG34124, AA732731, T39216, R85616, D54711, R53551, AI523706, N23210, AA737342, AA305887, H06006, AA855148, AA159427, AI956031, W80897, N36598, W38538, AI708463, T34258, D19591, AA568544, AA758826, W26873, T75286, N91049, T33457, D82466, AL008725, AF107406, S83440, D17446, I34403, AC002565, AC007384,

400	HHFCX08	859354			<p>AC004953, AC006480, AC006006, AC003037, AC005081, AC005537, AP000194, AC005996, AP000313, AC004887, T39564, T49001, T51027, T51119, T52635, T52636, T92662, T96399, T96483, T77694, T77871, R10480, R10524, T85612, R26017, R31416, R31417, R31940, R31986, R39183, R39327, R44291, R45161, R44291, R45161, R68587, H05490, H05956, H12133, H13202, H13569, H13604, H13707, H13759, H39869, H54460, H54549, H62527, H63569, H78832, H82866, H88720, N24185, N34198, N36374, N71957, W03674, W20495, W20251, W32740, W56201, AA054354, AA054436, AA062873, AA070066, AA070835, AA078978, AA084013, AA112169, AA126374, AA130792, AA143537, AA148157, AA191305, AA494535, H62594, H85469, AA662462, AA947138, D82587, N56019, N56389, N83818, N84652, W26834, C04818, C14771, AA130964, AA247790, AA291024, AA412703, AA585266, AA628194, Z19435, AA845243, T25450, T25453, AA860706, AA985151, AI097150, Z28687, Z30133, T27432, F03466, F05953, F05952, F03571, F07189, F07315, F00126, F00213, R10895, R10946, Z20073, AA694564</p> <p>AA446834, AA428171, H40390, AL040117, W01904, R20700, AA978340, AA910696, AI672174, AA760703, AW172759, AI923817, AA446835</p>
401	HNTEGS4	859702		<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1348 of SEQ ID NO:400, b is an integer of 15 to 1362, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:400, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the</p>	<p>AA418408, AW237234, N45214, AI081797, AW293817,</p>

402	HNFZ19	860915	<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1389 of SEQ ID NO:401, b is an integer of 15 to 1403, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:401, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2373 of SEQ ID NO:402, b is an integer of 15 to 2387, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:402, and where b is greater than or equal to a + 14.</p>	AA927507	<p>H98066, AI346325, AL120815, AI609222, AI340324, AI089431, AI160481, AW362004, AA173948, AI128176, AI346651, AW025079, AA987217, AI146776, AI143181, AW026314, AI203634, AI479977, AI381614, AI276013, AA404263, AW020546, AA778163, AI146782, N51322, AA996322, AI128001, AA009485, W52982, AI342106, AW023446, AA176998, AI829200, AW166929, AA976923, AI088295, AI221676, AW022014, AI961317, AA860986, AA716493, N63327, AI479473, AI377519, AW043623, AI337959, AI346240, AA227142, AI334238, AI871328, N36163, AA937521, AI735157, AI339702, AI023362, AI279584, AW276346, AA573338, AI637574, AA173910, H99800, AI684359, AI131000, AI281359, AA040083, AA451681, N70597, AI091140, AI963613, AA194088, N35688, AI022353, N20212, AA732819, AI146931, AA600333, AA455063, AA174011, T49150, AA173546, AW083530, AA427909, AA775302, AA523857, AA737743, AA424132, AA101472, AA513236, AA983546, W04916, AI273250, AA102703, N25762, AI300889, AA574350, AA235211, AA897562, W52983, AA984957, AA878940, N50731, AI675859, AA047630, AI364087, AI472853, AA643825, W78213, H88411, R50720, AA613549, W95401, AI862791, AF121165, AI244736, AA009899,</p>
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403	HCDEA29	861209	<p>AA189001, AA748624, AA604006, AI350102, H88352, AI866721, AA083715, AA872082, AA235084, W95450, AA427370, AA177093, AA111980, R69033, AA988263, AA737904, W77786, W72680, AI291399, AA321329, W51846, AI022288, R69160, AA526430, AA625937, AA938583, T63358, R64544, R73395, AA730629, AI709132, AA927680, H03596, AI499906, AA169667, AI476078, R69274, AA370521, AA970421, T40877, AI355234, AA181771, T74190, AI352419, T49149, H03802, AI434893, AA013225, R62859, AI868456, R69032, AA989340, T49169, AI275054, AI343802, AI686041, N66155, AI718261, AI472860, AW168310, AI522134, T98224, AI269841, AI918430, AA843340, AA352637, AW337126, R64529, AI986125, AA625666, T64000, R81483, H89144, AA971864, AW379006, T92828, C18921, AA381567, AA309580, T63609, T49168, AI571495, N98678, AW103915, AA551544, AA872081, W35265, AA629207, T39901, R62810, AA340530, AI922130, AA886252, AI918429, AW025133, AA872235, AI419594, D59247, H21733, AA362235, AA343621, R20736, AW022353, AW151874, AI926159, AA669494, T63458, AA401266, H21934, R31268, R33258, AA299046, T63682, AA872964, D61995, R33259, AA169280, W23587, AW370922, AI214942, W33206, AA189002, C21454, R27858, AA059031, AI784403, R64545, AA047574, AI092088, AW085886, T98223, T64111, W37270, R64530, R85757, U77396, AF010312, AC002352, AC006538, AC007021, AC004143, AC004024, AL033527, AC004966, AC005332, AC004491, AP000952, AC006262, T64031, T64078, T92749, R31874, N67272, W70316, AI094890, W19386, AA094519, AA437404, AI051527, D20502, AI291627, AI348372</p> <p>AA788946, AI754368, AL138165, AW069293, AW303444, AI831403, AI755129, AW237056, AI093206, AI753354, AA393869, AI863045,</p>
			<p>Preferably excluded from the present invention are one or more polynucleotides comprising a</p>

<p>nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 4048 of SEQ ID NO:403, b is an integer of 15 to 4062, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:403, and where b is greater than or equal to a + 14.</p>	<p>AA393803, H15868, AW081949, AW069235, AI753546, AI679040, AI469093, AI754760, AW239269, AA678550, W58265, AI348137, AI141432, AI750956, AI270477, AI753984, AI752931, AA081393, AW272507, AI890627, AW152185, AA142985, AI679765, AA600345, AI683662, AA599911, AI955804, W72891, AI683274, AW022057, AI554502, AI368694, W78174, AA723207, AW069330, AI750957, AI911862, AA147548, AJ243226, AA994259, AI445315, AA663291, D59314, AI918010, AI923317, W92396, AI825356, AW083677, AA150915, AW275175, AI584114, AA679767, AA678400, W76096, AI002980, AA478481, AI753210, AI753172, AI754137, AA328665, AI635318, AI016709, AA705988, D62627, AA332855, AI539100, H93952, N64047, AA659665, H79672, T91649, AA852182, AI346933, AI142490, D79766, AA614734, AW371066, AA853145, AW376196, AA361568, N90566, W92395, AA373866, AI926391, W20207, AI382388, AA375057, AW438987, N93406, AA357630, AW022533, T95571, T93254, R09121, AA852181, AA333641, T95570, AA333626, AW276393, W21448, AI003181, N67161, AI567192, AW070658, W05687, AA853144, AI061096, AI364425, H93951, AW019988, AW023072, R09120, AA541569, H79673, AI439452, AI812015, AI866127, AI570807, AW004886, AW149925, AW151786, AW131282, AA470491, AI269205, AL119863, AI583065, AI687168, AI802240, AI365256, AI288050, AI333638, AI524671, AI927233, AI439762, AI590227, AI611743, AI537677, AW089226, AI621341, AI802654, AI624693, AI284035, AI564719, AL110306, AL119791, AI433157, AI702073, AI929108, AW089405, AI961589, AI538259, AI630928, AW089275, AW132056, AI590830, AI587156, AI285826, AI270183, AI590134, AI554485, AI469505, AW080992,</p>
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AI866457, AI609360, AI934035, AW090550,  
AI963846, AL048656, AA514684, AW083750,  
AI249946, AL041150, AI815232, AI591420,  
AI573060, AI932949, AI801766, AA835801,  
AA743012, AI570861, AI611738, AW151136,  
AI560171, AI683348, AI811373, AI610402,  
AI950877, AW051088, AI868204, AI890507,  
AI636456, AI475371, AI868931, AW020095,  
AL043975, AW172745, AL045500, AW087445,  
AI923989, AI500061, AI696398, AI470477,  
AI345745, AW160916, AL037454, AI499621,  
AW163834, AI860496, AI499131, AW118496,  
AI362580, AI679266, AI862139, AW081866,  
AI698391, AA911767, AI625464, AI612852,  
AI537617, AI799183, AI866770, AL042382,  
AI619502, AI619737, AI457369, AL046944,  
AI523964, AW088903, AL079963, AW172607,  
AI677796, AA848053, AI537074, AI932503,  
AI474146, U73778, AL096771, X61024, J05137,  
D00824, U25652, U57362, U57361, S48373, U57095,  
S48374, S48383, AL050138, I30339, I30334,  
I89947, AF090901, AF182215, AL117435, E05822,  
I48978, AL137459, AF177401, Y11587, E04233,  
AL050116, AF118064, AL049464, AL137539, Y16645,  
AL133640, AL137429, AF028823, I33392, AL050149,  
A93350, AF175903, AL049283, AF069506, A08916,  
I48979, A08910, AL110280, X82434, A08909,  
U72620, AL133080, AJ005690, Y14314, AL137461,  
AF026816, A08913, S68736, A12297, AL080159,  
AF087943, AF090900, AL137533, A45787, AL122123,  
AF078844, AF097996, Z13966, AF111849, AF090903,  
D83032, AR011880, AL050277, AF113690, Y10823,  
AL117457, U42766, I89931, A65341, X70685,  
Z37987, AL137300, AL117460, AL110221, AF158248,  
X06146, I49625, AF111851, AL133606, AJ000937,  
AL049430, AL137480, AF113691, AR038854,

404	HCYBJ35	861534	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 847 of SEQ ID NO:404, b is an integer of 15 to 861, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:404, and where b is greater than or equal to a + 14.</p>	<p>AL122110, AL050024, A77033, A77035, AJ242859, AF183393, AL137521, AL133568, U80742, AL137267, AB016226, I03321, U53505, AL137550, AF039138, X63574, S78214, AL137479, AF113019, AL122050, AL137271, Y09972, AF039137, AF113013, X98834, AF111112, AL049452, AL080127, AL133016, AL133560, AF113677, AL110196, U87620, AF146568, U35846, AF090934, AF090886, AL050108, AL117394, AL122093, AF106657, U72621, AL133113, AF061943, E01573, E02319, AL133557, AF113694, AR013797, A08908, AL049466, S83440, AF017152, A08912, I32738, AL096751, AL122121, AF057300, AF057299, AF104032, X53587, AL080124, AL137294, AL049314, E02349, AL137523, E07108, AL122045, AF1855576, AL137557</p> <p>AA305455, AW015301, N28365, AA593514, AA569620, R18925, AA582378, D80522, D58283, D80253, D80366, D80133, D80043, D80251, C14389, D80391, D59787, D57483, D80196, D51022, D50995, D51060, D81026, D80248, D80045, D59467, D59859, D59275, D51423, D80022, C14331, D80166, D80195, D59502, D59619, D80210, D51799, D80164, D80240, D80227, D59927, AA305409, D81030, D80024, D59889, AW360811, D80269, D80212, D80188, D80247, D59610, D50979, D80219, C15076, D80038, AA305578, AW377671, C14014, D80193, D80268, AA514186, AA514188, D80378, D80439, D80241, T11417, AW177440, D80302, C14429, AW178893, AW178983, C06015, AW375405, T03269, D59373, AW177731, C75259, AW178906, AW366296, AW179328, AW360844, AW360817, D51103, AW375406, AW378534, AW179332, AW377672, AW179023, AW178905, D80014, D80157, F13647, AW378532, AW360834, AW177501, AW177511, D51759, AW352170, D58253, C05695, AW352171, AW377676, AW177505, AW179024, D59653, AW178907, AW378528, AW178762, AW179019,</p>
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	AW367967, D80132, AW176467, D51250, D80134, AW360841, AW179020, AW178775, AW178909, T48593, D45260, AW177456, AW179329, AW178980, AW369651, AW178914, AW177733, AW178908, AW178754, AW179018, AW352158, C14227, AW352117, AW178774, AW352120, AW179004, D51079, D80258, AW179012, AA809122, AW378525, AW352163, D81111, H67854, C03092, D58101, AW378543, D59503, H67866, AW177728, AW179009, D80064, AW178911, AW352174, AW367950, AW177722, C14973, AW378540, AI910186, D58246, AA514184, AI525923, AW178781, AI905856, AW177734, T03116, AI525917, D59317, C14407, AW178986, C14344, AW378533, D45273, C14957, D51221, D59474, D60010, AI557774, AI525235, AI525920, D59627, AI535850, AW177723, AI535686, D59551, AI525227, D51213, T03048, D60214, C14046, AI525228, C14298, AW378539, AI557751, D80168, AI525242, AI525222, AI525912, AW179011, AA285331, AI525925, Z33452, AI525215, C16955, T02974, AW378542, C05763, D51097, Z21582, AW360855, AI525237, H67858, C04682, D51231, D52291, T02868, D51053, D59695, AJ132110, AB028859, AR018138, AR008278, A62300, A62298, A84916, AF058696, A82595, AR060385, AB002449, X67155, Y17188, A94995, D26022, Y12724, A25909, A67220, D89785, A78862, D34614, AR008443, I50126, I50132, I50128, I50133, D88547, AR066488, AR016514, AR060138, A45456, A26615, AR052274, X82626, AR054175, Y09669, A43192, A43190, AR038669, AR066487, I14842, A30438, Y17187, AR025207, AR008277, AR008281, X68127, A63261, D50010, AR066490, X64588, AR062872, A70867, I82448, I18367, AR016691, AR016690, U46128, AR008408, I79511, A64136, A68321, D13509, AR060133, AB012117, X72378, AF123263, AR032065, U79457, Z82022, AR008382

405	HEBGA63	861697	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1016 of SEQ ID NO:405, b is an integer of 15 to 1030, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:405, and where b is greater than or equal to a + 14.</p>	<p>AI080468, AA418647, AW161389, AI811956, AA573763, AA878936, AI911674, AA314980, AA670106, AA236821, AW391361, AW382143, AI151265, AW191948, AA789208, AA687793, AA598814, AA334072, AA775852, AA307422, AI358482, W39512, AA211876, AA774980, W16806, AA610596, AA410349, AI055879, AW162057, C05917, AI815919, AI928921, W39158, AI253295, AA774763, W24716, AA873217, AA253317, AA236781, D82214, AI038950, N93063, AA984706, AA418548, AI268085, AA262342, AA854900, F00834, W05730, AI678756, AA815410, AI928249, AA579924, AA910210, AA406409, AA834206, AA878938, AA317968, AW298758, AA683038, R11913, AI813763, AW024904, AA341594, AI131512, AI150646, AI124762, AA319872, AA989397, AA933884, AA565524, W52885, AI929174, AW382150, W80819, AI302520, AA209282, AA906792, F01195, T99166, AA988035, AA602376, AA576237, AA362873, AA872148, AW392356, N90236, AW392318, AI222938, R42924, H07003, AW271516, AI949964, AA158397, AA747874, AA004976, AI948692, N74886, W60093, AW392089, AA113297, H05454, AA004863, W15220, AA324556, AI271996, AA158514, AI272005, AI985478, AI469035, AI761937, AW374324, AI823614, F03425, AI766959, X03747, U16799, X03883, X04635, M38313, X03937, AF204927, X05297, J02701, M14137, X17162, X16646, M25159, M25160, X61433, M25161, X17161, AF034480, X63375</p>
406	HFACI10	861826	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2414 of SEQ ID NO:406, b is an integer of</p>	<p>AA058863, AI681932, AI433708, AI701156, AA744756, AI765543, AA748766, AA573886, W74619, AA446934, C05807, AA807534, N34842, AA447856, H10332, AA576797, AI401071, AA059327, AI249003, N80477, AW028793, AI291540, AW005248, AW022291, AI345989, N62688, AA128903, AA040014, AI475548, AA443357, AA314184, AW016942, W19934, N68510,</p>

407	HETCM67	861909	15 to 2428, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:406, and where b is greater than or equal to a + 14.	N63631, N80462, AI222850, AA761854, AA670372, N55352, AI333296, R69485, AI168591, AI333297, AA568155, AI989358, AI346776, AA134835, AA464610, AA501941, H99168, H90437, AI262312, AI769724, H10333, AI348289, AI299376, R83327, W00825, W94195, W01972, H52396, AI201740, AA112365, R24954, AW131097, AI275051, H90386, AA219261, AA620503, AA219337, AA598718, AI937826, AA018112, AI695367, AI671097, AW183475, N27057, N69539, AA086194, AA063281, AA719017, AI208725, T16450, R35684, H52395, N43917, AI198900, AI271916, AW162284, AW242381, R83424, AI951002, AA112364, H86605, F13382, AA988348, AA766496, N77359, AA653119, AI590732, H86524, R34527, AI002326, T77193, Z38631, AW401758, AA257964, T33721, N34801, R42813, T17317, AA018111, F02106, AI879795, F10973, T16747, AI214496, AI253777, R49037, AA301894, R45217, AI674372, AA601562, AA351220, AA769079, W21605, AA063266, F01935, AW264208, R70378, F05027, N79085, Z42425, F05675, AA628039, D31586, AI445203, AW272928, D79284, AW023691, AC002323, Z81330, AF052138, AC002105, AI927716, AA479710, AI624420, AI696897, AI470208, N64824, AW298323, AI921914, AA280392, AA648830, AI866003, AA805155, AI624552, AI393447, AW364516, AI364737, N75676, AJ242015, AF137334, AJ242014, AF137335, A61275, A61276
408	HCRNF78	862197	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2033 of SEQ ID NO:407, b is an integer of 15 to 2047, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:407, and where b is greater than or equal to a + 14.	AI082249, AI917738, AI765311, AI569854, R60843,

409	HRACX96	862232	<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 878 of SEQ ID NO:408, b is an integer of 15 to 892, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:408, and where b is greater than or equal to a + 14.</p>	<p>AI079350, AW015424, R34737, AA127263, AI860770, AI094178, AA580273, AI886702, AI886517, T80049, AA127262, AA377155, AI024477, AI744759, AL119324, AW372827, AW392670, AL119457, AW363220, AL119399, AL134920, AW384394, AL119363, AL119391, AL042975, AL119483, AL119319, U46341, AL119497, AL119355, Z99396, AL119341, AL119484, AL119396, AL119443, AL134902, AL042614, AL119335, AL119522, AL042544, U46349, U46346, U46351, AL042965, AL042433, AL119496, AL047163, AL079683, AL119464, AL042973, U46350, U46347, AL042898, AL119444, AL134536, AL043011, AL042984, AL042450, AL037205, AL119401, AL119439, AL119418, AL042978, AL042542, AL042980, AL042896, AL042970, AL119488, AL043029, U46345, AL134527, AI142139, AL043019, AL119304, AL042551, AL042428, AL043033, AL043003, AL119320, AL043039, AL043037, AL043008, AL042850, AL133095, AR066494, AR060234, A81671, AR054110, AB026436, AR069079</p>
			<p>preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 682 of SEQ ID NO:409, b is an integer of 15 to 696, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:409, and where b is greater than or equal to a + 14.</p>	<p>H89053, AA324208, AW205793, AW021628, AP000967, AF200465</p>
410	HTLAK94	862237	<p>preferably excluded from the present invention are one or more polynucleotides comprising a</p>	<p>AI539386, AI190303, AI219986, AA868538, AI345954, AA988977, AI309975, AI338679, AI200426, AI720044, AI827995, AI807471,</p>

		<p>nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1871 of SEQ ID NO:410, b is an integer of 15 to 1885, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:410, and where b is greater than or equal to a + 14.</p>	<p>AA932930, AI829710, AW268605, AI202768, AI148589, AI808710, N37092, W74439, AI436105, AI332422, AI222787, AA85258, AI091541, AI830140, AI476645, AA436117, AI393567, AI742423, AI991280, AA976254, AI040961, AI911731, AI204236, AI807161, AI798704, AI091532, AW001083, AA883578, AI536845, AI684261, AA906270, AI286196, AW084515, AA884285, AW195890, AI203679, AA884231, AA435561, AA843421, AA393148, AI142135, AA776717, AA740667, AI149711, AA917965, AA758038, AA923373, AI936554, AI167652, AA994527, AI083755, AW043785, AI291760, AW269733, AW304042, AI243370, AA456074, AW391262, AI694334, AI027967, AI243219, AI167246, AA910051, AI031908, AA846787, AI200425, AA757222, AA777492, AI311479, AA758549, AI833323, AI091504, W58740, AI688130, AA725406, AI935008, AI025986, AI318065, AA972041, AA962659, AI829757, AA897637, N29346, AA748637, N40362, AA996162, AI150116, AI799122, AW166483, AA971938, AI083851, AI679583, AI243421, AW188625, AA884703, AI347903, AI241349, AI024835, AI807973, AW183835, AI025228, AI798180, AI858097, AI276559, W79084, AA875917, AA410432, AI493367, AA905015, AA505880, AW371415, AA904368, N39659, AI743644, AA305510, AA938552, AI284271, AI377383, AI911350, AI187351, R23891, N27547, N26589, AW082764, AA954722, AI214377, N46406, AA843427, W00472, AA412317, AA954270, AA455577, AI971480, AA305179, AW085014, AI689289, AA740333, R65987, AI220007, AI216245, AA815444, AA099550, R76814, R65986, AA835882, AA969436, AA393638, R83423, AA861386, AI198119, AI168675, AA815351, AI698618, AA977877, AI762065, H72396, R71169,</p>
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411	HCQCV31	862277		<p>H02479, AI289227, AA952918, AA305134, AI205806, AI160545, AI269132, R23890, AI243242, AA970621, AI223152, AI215980, AA999722, AW082794, AA928243, AA890154, AA912408, AA927156, AA758323, H17429, R63480, D60944, H01351, AI216504, AW137925, AA932728, R63278, R89701, AA972542, AA885425, AI272123, AA628621, H12460, AI749504, R89052, AA724803, AA775373, H59895, H72421, AW135447, AA877346, H01218, R75983, R02720, R73757, R73969, AI826276, AA970616, AI001978, R76229, AA295914, H02478, R76230, H03862, R31547, R37557, AI189999, AA853105, F37219, D61030, AA548419, AA588892, AA483809, R73670, R73883, H00834, R63227, AA885048, AA442745, AW104374, AI885432, AI149979, AI784120, R31066, R26664, H17430, R76442, R36714, AA832163, AA833569, R79832, AF151810, AF039696, T85666, R23710, R25111, R25112, R72440, R76443, R79639, H03307, H03308, H12509, N57044, N72191, AA099077, AA159464, AA501911, AA512970, AA516390, AA534533, AA541583, AA577436, AA885823, AA928429, AA705903, AA709286, AA812583, AA860558, AA883844, AA907332, AA939048, AA953782, AI301012</p> <p>AA496007, AI871350, AA884932, AI935117, AI553798, AI955245, AA047742, AA424136, AI004223, AA507058, AA024473, AA232815, AI658551, AA931722, AA687866, AA233869, W47004, AI869173, AI802357, AW051013, AI675833, Z40855, AA047692, AI826548, AA863179, D44674, R34564, AI659726, H40502, AI363813, W47023, AW050996, AI040816, AA024472, AA779707, AA225080, T49964, AI333187, AA715876, AI536135, AC006077, AC004051, AC005003, M85145</p>
				<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 570 of SEQ ID NO:411, b is an integer of 15 to 584, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:411, and where b is greater than or equal to a + 14.</p>

412	HTJMG70	862285	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1398 of SEQ ID NO:412, b is an integer of 15 to 1412, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:412, and where b is greater than or equal to a + 14.</p>	<p>W81119, AW361705, AI023171, AA535154, AW157219, AI921982, AA515031, AW069552, AI3111724, AI857692, AI862158, AI289893, AI079531, AA235169, AI051186, AW135105, W78767, N64363, N92160, H27964, AA554699, W24363, AI358378, AA827945, AW151259, AA778925, N48967, AA935704, N98752, AI087228, AI289894, H27965, AA234898, H25648, N48871, H16658, AW264713, AA554060, AA761787, AA256622, W30963, AA748881, H16515, Z42632, AA642946, Z24944, N45683, AI468784, R62650, T05232, C18517, AI382379, H90088, Z38800, N99389, N45623, R62602, AA634880, R36126, R36398, AA256515, H98998, AI474159, H89998, AW273277, AW163223, T07753, N71434, N93642, N98751, AA091881, AI557258, AI557082, AI541321, T18597, AI541205, AI525500, AI557533, AI525556, AI535660, AF111168, A62298, AR050070, AA506281, AL044326, AI624181, AA598748, AI278429, AI651080, AW236530, AI206105, AA593024, AA393540, AI002760, AI207152, AA653491, AI299472, AW020592, AW020397, AW020931, AI525653, AW020634, AW019988, AI343030, AI340510, AI334889, AW023863, AW020328, AI557808, AW021178, AW020425, AI336565, AW022826, AW022308, AW022299, AI312264, AW021717, AW020406, AI349805, AW020710, AW023351, AI783838, AW022981, AW020403, AW021693, AI274731, AI559782, AI557238, AW022593, AW021182, AI310920, AI313352, AI307503, AW020480, AI557104, AI525669, AI313320, AI336585, AI334913, AI349266, AI334452, AI349787, AI310951, AI344938, AI340634, AI312146, AI340537, AI312339, AI309431, AI312165, AI345258, AI349288, AI349628, AI340610, AI307459, AI343140, AI349971, AI348879, AI307507,</p>
413	HSNAT52	862423	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 350 of SEQ ID NO:413, b is an integer of 15 to 364, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:413, and where b is greater than or equal to a + 14.</p>	

414	HHFCZ67	862456	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1319 of SEQ ID NO:414, b is an integer of 15 to 1333, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:414, and where b is greater than or equal to a + 14.</p>	<p>AI340639, AI307538, AI311604, AI343995, AW023469, AI349220, AI340613, AI307456, AI348897, AI311440, AW020876, AI312333, AI312398, AI310945, AI312431, AI312414, AW022168, AI349952, AW023955, AI311472, AW023884, AW020629, AW022760, AI349269, AW021059, AW021466, AW021561, AA814582, AA189092, AL047042, AI349246, AW019985, AI541027, AW023617, AW021066, AW021909, AW195116, AB002359, AB031064, A59344, U49908, S56212, X73361, AL133016, M79462, X96540, AL137267, X60769</p>
415	HHFIA95	862486	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 3132 of SEQ ID NO:415, b is an integer of 15 to 3146, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:415, and where b is greater than or equal to a + 14.</p>	<p>Z43633, F08755, T58116, R18988, AA348184, AA101651, AA626439, AA283169, H69209, AI079568, T36154, AI762375, AA459747, AW084483, H75695, H52299, H51818, AA455530, AA410814, AI768686, AI925862, AI859633, AW074071, AL050217</p> <p>AI761722, AA903124, AL134516, AI831473, AA604081, AA603455, AI694366, W80392, AI817117, AW168295, AI935246, AA887227, AA211611, AI076013, AW263745, AA211683, AI281897, AI827407, AI244255, AW086067, AI660036, AA044091, AA917034, AI637588, AI559254, AA393852, AI190898, AI808102, R60765, W78970, AI040177, N22921, AI242430, AI122753, AA604102, W56449, Z33451, AA547998, AW242400, AA044281, AI188686, AI338330, AA765282, AI338329, AA159042, H18545, AA393851, AI973242, R60253, N63356, AA569460, F06764, AA541308, AA936280,</p>



416	HMSOR85	862709			<p>AA995784, AA031985, AA993733, R67234, AW136432, Z39821, AA173320, H51502, AA173319, AW316605, H02648, Z26973, R81685, AI244925, AI016876, H18437, AW265135, T54070, AI541355, AA565781, AW023057, R74303, AA856745, T34301, R28236, H74149, R38158, AI332886, Z42782, AW242417, R34113, AA731347, H51503, R38121, F05473, D57866, AA031984, R27980, R81686, R38063, R38035, AA300862, AI804174, AW050651, AI499327, AA894455, Z38926, AW151345, F01732, AA248693, AI364416, AW119129, AA342961, AW402975, AA708733, AA830423, AB002533, U93240, Y12393, AF020771, D17139, AL022152, AL109623, AC000100, AC004945, AC004129, AP001172, AC005392, AL034551, AC005783, AC003001, AL031054, AC005818</p> <p>AA227536, AW134806, D62997, AA460722, AA401898, AA233391, AW172757, AI268277, AW203958, AI023110, AI271519, H02043, AA227890, AI083534, AA994213, AA451869, AA911642, AW169513, R11169, T95434, R81939, H01961, AA252253, AI925157, AI440213, R39952, AA224370, R81940, AI160601, AW079566, AF131846</p>
417	HBJU68	863865		<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 580 of SEQ ID NO:416, b is an integer of 15 to 594, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:416, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 548 of SEQ ID NO:417, b is an integer of 15 to 562, where both a and b correspond to the positions of</p>	<p>AA115295, AA426325, AI983849, AA873315, W84510, W84522, AA873307, AI355170, AW303776, AA969227, AA780019, AA599312, AA534678, AI338244, AI926527, AI460358, R88096, AW069314, AA894546, AI127202, AW020877, AI926969, N33197, AA625435, AA115270, AW021988, AW083323, AA427844, AI357402, AA429402, AW073382, AA367342, AL049024, AA493560, R88205, AI571515, AI142383, AI628677, AA426326, AA992123, H71599, AA954743,</p>

418	HDPBN09	863944	nucleotide residues shown in SEQ ID NO:417, and where b is greater than or equal to a + 14.	<p>AW117398, AI214877, AI911337, AA233622, AA864950, AW275286, AA213392, AA425133, AI475634, N24819, T94173, AI419516, AI701411, N42400, AI147373, AI287696, AA622262, AA505746, AI350967, AI083596, W74274, N63079, N33426, AI832767, H71470, W44645, T94091, N52803, AI184310, AA195578, AA233420, AI005421, AA029095, AW014339, AA908660, W79889, AI350791, AI368443, AI954381, AI473104, AI275186, AW241382, AA515528, AA194897, AA782901, AW069414, AA426011, AA485787, AA299914, AI305169, AL117489, S82009, S82008, M63599, AC004913</p> <p>AA186686, AI983378, AW073370, AI571754, AI949363, AW297852, AA866117, AA837398, AI087053, AA527147, AA134227, AI214230, AI134226, AI219901, AA740489, AI766718, AI083795, AI471975, AA186685, AW249810, AI889098, AA969313, AA661756, AA908358, AA326181, AA622860, R72195, AI955869, AI815177, F34949, AA350806, AI697087, AW009686, AI738560, AW248074, AA586777, H96214, AA301762, F19158, AA350807, W21593, N89670, AW183231, AA346389, C00663</p>
419	HFNAC49	864428	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1398 of SEQ ID NO:418, b is an integer of 15 to 1412, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:418, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1925 of SEQ ID NO:419, b is an integer of 15 to 1939, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:419, and where b is greater than</p>	<p>AA992583, AI417032, AW196768, AA527116, AI416996, AA994849, AI097395, AA315508, AA263045, AI912268, N36881, AA460609, AA837748, AI375674, AI052203, AI383778, N66508, AI368949, AW291674, AA689425, AI912651, W39520, AI753186, AA336608, AI290160, H13540, R66265, N56046, R66729, N46151, AI250865, AA706445, W16926, AC007899, AF167460, U50633, AR030750, M35663, I66342</p>

420	HHETS46	864808	<p>or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 562 of SEQ ID NO:420, <math>b</math> is an integer of 15 to 576, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:420, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	<p>AI264637, AW440517, AI289816, AA308065, AI087224, AI333981, F22528, AI087291, AI042559, N32838, AA101212, AA513003, AA127626, AA716353, AA121528, AI208270, W39584, AI024761, AI805206, W44935, AA448463, AI685445, AA677140, AA045311, AI094396, AA932240, AA062780, AA973273, AA112905, AA062735, AI911056, AA082078, AI347381, AA045417, AI832874, AI086794, AA431571, T96692, AI890885, AA894627, AA304050, AI248836, AA327793, AA302176, AA302332, AI350909, T96809, AI283682, AI695634, N42284, AA074777, AI097092, AA704961, AA704993, T97458, R09226, T97730, T97914, AA203274, AA083929, AA331180, AA593102, AI540890, AI541321, AI557426, AI541056, AI557602, AI541027, AI541279, AI535813</p>
421	HHATS67	864822	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 937 of SEQ ID NO:421, <math>b</math> is an integer of 15 to 951, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:421, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	<p>AI078121, T61964, AL079622</p>
422	HLHTL45	865044	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 659 of SEQ ID NO:422, <math>b</math> is an integer of</p>	<p>AA810700, AI459372, AW204494, AI167739, AI308750, AW079517, AI304463, AI348049, AA781353, AA740190, AI245908, AA448390, AA194605, AI073753, AI245270, AI160024, AI346019, AI240109, AA579960, AI146972, AA804861, AI244610, AI018032, AI924255, AA782917, AI198405, AA150413, AI498033, W84699,</p>

423	HHEIZ45	865420	<p>15 to 673, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:422, and where b is greater than or equal to a + 14.</p>	<p>AA150136, AI088809, AW195727, AI350465, AW207349, AA773774, AA908581, AW182756, AI023582, AI698603, AA772649, AA740373, AI245510, AI004632, AI198724, AI566264, AA477201, AA291758, AA477036, AA768998, AA781769, F34275, AA479797, H69491, AW074444, AA448387, AA026249</p>
			<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2059 of SEQ ID NO:423, b is an integer of 15 to 2073, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:423, and where b is greater than or equal to a + 14.</p>	<p>AA877614, AA628899, AA423875, AW291028, AI149868, AA209244, AI802203, AW087182, AI199494, AI218592, AA423837, AW004725, AI042456, H15124, AI916084, N74995, AA807339, AI739439, AA994646, T90789, AI570646, AI563977, AA504557, AI671879, AI276433, AA845650, AI659007, AI953416, AA758717, AI699947, AW374652, AW235833, AI401836, AI351215, AI440396, AI923989, AI433157, AI554821, AW151136, AI539771, AI537677, AI500659, AI815232, AI801325, AI500523, AI582932, AI284517, AI500706, AI491776, AI445237, AW151138, AI889189, AI521560, AI500662, AI284509, AI889168, AI866573, AI633493, AI434256, AI805769, AI888661, AI284513, AI888118, AI440252, AI633125, AI927233, AI889147, AL047611, AI866472, AI670009, AL045500, AW172745, AI702073, AI500061, AI494201, AI866510, AI637584, AI433976, AI471909, AI289791, AI815239, AI687362, AL042377, AI872300, AI929108, AI436429, AI275175, AW090071, AI499463, AI801286, AI915291, AI887308, AI610362, AI866770, AI285417, AI440239, AI698391, AI521594, AW163834, AI537273, AW198090, AI371228, AI436456, AI963846, AI567940, AW087445, AI817244, AI345587, AL110306, AI610557, AI612913, AI285826, AI863014, AI499512, AI889133, AL042787, AI610402, AI283760,</p>

	AI434223, AI610429, AL039086, AI539632, AI889148, AI539847, AI274759, AL042538, AL042551, AI446536, AW148363, AI567935, AI805762, AI432656, AI049851, AW073865, AI612852, AI580435, AW190194, AI270183, AW172723, AI249946, AL048323, AI866608, AI872423, AI432666, AI620284, AA928539, AI826636, AI567993, AI859991, AL047422, AI538885, AI866465, AL036780, AW268302, AI434242, AI866691, AI433968, AI371251, AL040844, AI345415, AI890223, AI537191, AI863241, AI796743, AI440263, AI561170, AI242736, AI866469, AL041862, AL042365, AI432644, AW083804, AI804505, AI866786, AI690946, AI860003, AI354998, AI678496, AI887499, AI677796, AI343030, AI538850, AW130776, AI887775, AI288285, AI590043, AI653979, AI926593, AI587114, AI582912, AI539800, AI932794, AI866457, AL119836, AI445992, AI500714, AW301505, AI340519, AI912356, AI285439, AL042745, AI623736, AI355779, AI581033, AI431307, AI491710, AI249877, AI440238, AW169671, AI567971, AI431316, AW192652, AI699056, AI539260, AI828574, AA259207, AI434468, AI654276, AW151979, AI612885, AA420758, AI539781, AL048340, AW152182, AI539707, AI702065, AI564719, AA420722, AW118518, AI885949, AI768496, AI285419, AI559957, AW089557, AW131331, AI521571, AI469775, AI890214, AI866581, AI349772, AL042557, AI797908, AI648567, AL048312, AI864836, AW074057, AI815150, AI567953, AI446495, AC004812, I48978, I89947, AF113677, A77033, A77035, AF113699, AF090901, I48979, A08913, AF182215, I66342, AL110196, A08910, A08909, AF087943, AF079763,

AL049382, AF090900, A07647, AC007458, S61953,  
AL122049, AJ012755, AF017437, AL137550, M92439,  
U35846, X72889, I89931, AL122121, I49625,  
AF113019, AF090903, A08916, U30290, AL117435,  
AL050277, I03321, AL133072, Z82022, AL050393,  
AL137480, X62773, AF104032, Y16645, AL080159,  
AL133075, AF146568, AF090896, S78214, AL137283,  
AL049938, Y11254, AL050149, AF125948, X82434,  
AJ000937, AL137271, AF183393, AL137658,  
AL133560, AL122110, A65341, AL133080, AL133070,  
AR059958, AF026124, E07361, A58524, A58523,  
AF026816, AF091084, AF004162, AF067728,  
AL110221, AL133113, AF032666, AF067790,  
AL137560, AL137459, AL049452, AL137533,  
AF177401, U80742, AL137488, A03736, AF106862,  
AF131773, AL049283, AL117460, AL133557,  
AF090886, AL096744, AF158248, AL110280, E12747,  
I68732, AL133640, S63521, L40363, E02349,  
AF176651, AL122098, AF185614, Y14314, AL133016,  
X99971, AL133565, AL133049, AF113694, AL133084,  
AL049300, AL137557, AL050024, AL049430,  
AL117585, A93350, AC002471, AL050116, AL133077,  
AC005374, AL122123, U92992, AR000496, U39656,  
X70685, AL049466, AL133067, AJ238278, AR053103,  
AL117457, X65873, AF115410, E05822, Y11587,  
I33392, X84990, S68736, AF180525, AR068466,  
X63574, AL117583, AL080124, AF090934, AF118094,  
AL050138, AL133619, AF019298, E15569, AR038854,  
AL137463, AF119337, I09360, AF097996, X06146,  
I42402, L31396, AL050108, AL122093, AL096751,  
AF079765, AL137521, L31397, I08319, AR011880,  
I35495, AF113691, AF113690, E03348, AF113689,  
AF200464, AL080074, AF113676, U42766, A18777,  
U00763, AL137712, AL117626, AF120268, I17767,  
X52128, E01187, AF108357, AL110228, AF106657,  
AL137548, AF061943, U49908, AF035161, AF002985,

424	HNAAF81	865421	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2595 of SEQ ID NO:424, b is an integer of 15 to 2609, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:424, and where b is greater than or equal to a + 14.</p>	<p>AL136884, AL137429, LI3297, AF126247, AF118070, U92068, AF132676, AF061836, AL137538, AF017152, AF185576, AR034821, AF057300, AF057299, AF113013, AF078844, AF076464, AL049464, AR009628, AF111851, I26207, X89102, AR038969, X93495, X96540, AF111112, AB019565, AL080060, AR013797, AF161699, AF090943, AF118064, AL133093, U67958, AL122050, AL049423, AL049314, AF141289, AL137648, AJ242859, AL080127, E07108, AF125949, AL122111, AL050146, AL080137, AL117394, AL137527, AL133606, DI6301, X98834, U72620, A93016, AF100931, X60786, X83544</p> <p>AA131472, AI741118, AI754213, AI143267, AW182304, AA746017, AI984675, AI001157, AA702327, AW129625, AI084582, AI275034, AA193297, AA328810, AI027611, AI151227, AW407686, AI431663, AI224859, AI910890, AI436774, AA195648, N95606, N69470, AI081581, AI338503, AA135941, AA195647, AI424020, AA323696, AI185201, AI033555, W27152, AA524496, AA055891, AA307138, AA148219, AI085028, AW162502, AA115512, AA285045, AI420987, AI810859, AA001867, AI479676, N79245, AI498247, N90962, AI041867, AI274857, N30668, AA470477, AI245586, AW160632, AA862812, AI004976, AA827925, AW340620, AA282822, AA553813, AI985443, AA669010, AA147218, AA676390, DI9675, AI524393, T34039, AA136257, R46125, AA912075, AA354027, AI829295, R40774, T35299, AW294232, Z40261, AI184426, F17833, AA070812, T32719, R14450, AA662529, AI611263, AI174660, AA552130, AI693004, AW082821, AI918275, R85087, AA389754, T15443, N59872, AW196058, AI824556, AA320857, AI889255, AI453266, AA742955, AI889517, AI635612, AW292521, AI497733, AI802542, AI612913, AW293664, AI492540, AI538716,</p>
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	AL036361, AI866780, AL036146, AI636456, AI537303, AL041772, AI963846, AA738104, AI564719, AL045500, AI433157, AI349004, AW150578, AI620284, AA225339, AL119791, AA640779, AI625079, AI475371, AI440426, AI432969, AI282903, AL036274, AI281773, AW026882, AI440239, AL040169, AL134259, AI493248, AL040827, AL079963, AL121014, AI567360, AW071417, AL036901, AW162071, AI349645, AW238730, AI312428, AW268251, AL038605, AI580190, AI340519, AI702406, AI436456, AI537677, AI445432, AL040243, AI285735, AI340582, AW103371, AI521012, AI635461, AW071349, AI671679, AA470491, AI469532, AI620868, AI439745, AI619502, AI687728, AL036802, AA508692, AW198090, AL038779, AL036396, AL119863, AI697137, AL039086, AI340603, AI818683, AI499393, AI699865, AW148320, AI800453, AI800433, AI500077, AI269205, AI610307, AI702433, AL036759, AW169653, AW161579, AI349772, AI536685, AW074993, AI567351, AI349614, AI868831, AI343112, AW089572, AI498579, AI433976, AW268253, AI815855, AI312152, AI345735, AI349937, AI934035, AA613907, AI348897, AA572758, AI269862, AI597918, AW068845, AI682743, AW129106, AI349933, AI524671, AI866608, AI1133489, AI673297, AI613017, AL121365, AL039132, AW302965, AA528822, AL047763, AI281762, AI554245, AI590128, AI250293, AI784252, AW268768, AI631107, AI633419, AI934011, AI866002, AI828731, AI874109, AI920968, AW302988, AI811168, AI824746, AI539771, AW268220, AW104724, AI696398, AL036980, AI500061, AI922901, AI273142, AI687375, I48979, AL133640,



AL137459, AF090903, I89947, AR011880, AL049452,  
 AF104032, AL117460, Y11254, AF090901, AF118070,  
 AF113694, AF090900, AF090934, AL133560,  
 AL117457, A08916, Y11587, I48978, AL049314,  
 AL050116, AL050146, AL137527, AL050393, S78214,  
 AB019565, AL122050, AL133557, AF125949,  
 AF106862, AL110221, Y16645, AL050149, I89931,  
 L31396, A08913, L31397, AF113690, AF113013,  
 AF078844, AF090943, AL133075, S68736, AF113691,  
 AL133606, AL049938, AL133080, AL133016,  
 AF090896, U42766, AF177401, AL049466, AF113677,  
 AL050277, AL050024, I49625, AF113019, AF118064,  
 AL110196, AF113699, AJ242859, AL080060,  
 AF113689, AR059958, AL137550, A93016, AL049430,  
 X84990, AL050108, AL117435, AL122093, AL133093,  
 X63574, AL122121, AL137557, AJ238278, AF017152,  
 AL096744, AF113676, AL050138, AL049382, E03348,  
 AF125948, AL080137, AL133565, E02349, AL117583,  
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 AF146568, I33392, AL117394, AF097996, A65341,  
 AL122123, AF017437, AJ000937, AF111851,  
 AL110225, AF079765, A08910, AL049464, AF158248,  
 E07361, AF183393, AL133113, AL137283, A58524,  
 A58523, AF118094, AL122110, AL049300, E07108,  
 U35846, U91329, X70685, AL110222, A08909,  
 A77033, A77035, I03321, AL049283, U72620,  
 AL050172, AL122098, X72889, Z82022, AL137271,  
 U00763, U80742, AL133072, A08912, A03736,  
 X96540, AL137538, AF087943, A12297, X93495,  
 AF061943, Y14314, AL137648, AL137526, I09360,  
 AF111112, AL080127, AL080159, X65873, AL110197,  
 AL137521, U67958, A93350, AF026816, E08263,  
 E08264, AL137560, Y09972, AL110280, AF111849,  
 AL122118, S61953, AL133568, I26207, X98834,  
 AF067728, E04233, AL137523, AF079763, AJ012755,  
 E15569, AL133558, U68387, AF185576, AL122049,

425	HSLGX52	866287	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 973 of SEQ ID NO:425, b is an integer of 15 to 987, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:425, and where b is greater than or equal to a + 14.</p>	<p>E05822, AL133077, AL133104, AL137556, AF026124, Z37987, AL133014, AF008439, X87582, AR000496, U39656, U96683, A07647, AF119337, AR038854, AL080074, I00734, AF057300, AF057299, U49908, AF003737, E00617, E00717, E00778, AL137476, Z72491, AL137488, U88966, A45787, Y07905, AR038969, U58996, AL137533, AR013797, M30514, AL133098, AF153205, AC004093, AF061573, AF100931, A90832, AF106827, AL137558, AF162270, AL133067, I17767, AL117440, E12747, AF095901, E06743, U78525, A08911, X92070, AC004200, AL137478, AL137480, L30117, AL137294, AJ006417, X62580, AJ005690, AL137705, Y10655, AF030513, E02221, AF067790, AR020905, L19437, AF132676, AL133081, AF061836</p>
426	HWLN121	866300	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1712 of SEQ ID NO:426, b is an integer of 15 to 1726, where both a and b correspond to the positions of</p>	<p>AI697569, AI697833, N21277, N32584, AI688219, AI291299, AI492326, N75967, AW206251, AA836065, AI916534, AA424349, AI292114, N31212, AA235383, AA555024, H45451, AI538241, H45537, AI784105, AA918245, AA747919, AI911801, AI251010, AA424515, H02792, AA215787, AA090140, AI446091, AW050558, AA683529, AI131054, N41921, AC003010, AC002468, AC005620, AC007088, AC004967, AC005837, AL033518, AC004617, AC004953, Z74617, AC002992, AC006581, AL033397, AJ251973, AC004887, AC003013, Z98941</p> <p>AA151676, AI769896, AW001439, AA442724, AA701093, AA988751, M79144, H43287, R85181, H26915, F37221, F32047, R85880, F31655, AI688230, R85111, R87768, AA379165, T34748, AA873108, AA670309, AA483340, R84489, D25831, AB023211, AL049569</p>

427	HKADX79	866414	nucleotide residues shown in SEQ ID NO:426, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1514 of SEQ ID NO:427, b is an integer of 15 to 1528, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:427, and where b is greater than or equal to a + 14.	AI659421, AI632698, AI969812, AI394313, AI739006, AW139577, AW271206, AI805043, AI79897, AW293868, AI923666, AA640596, AA308562, H80192, AW377553, AW377527, AA833662, AA910928, AI275400, AI191675, AI041565, AI693984, AI392758, AA776304, AI597816, AW138256, AI956051, AI085021, AI288918, AI076685, AA725434, AI824191, AA226122, AA524228, AI471844, N70113, AA143493, AA226045, AI123234, AA858158, AA532806, AA143492, W01829, N70775, AI183697, AI693773, AA304772, AA757995, AA152444, AI276951, AA613815, H78816, AI076680, AI283120, AA152445, AF228603, AF157600, AF170564, AI280901, AI922816, AI565695, AA148507, AI829019, AI400567, AI829508, AW374018, AI097630, AI634506, AI804426, AI446026, AA705946, AI422785, AI435801, AI369213, AI885226, AI432471, AA573316, AI912001, AI806682, AI333964, AA846015, AA482181, AI809117, AW002805, AW316839, AA282675, N33872, AI682044, AA759157, AI367910, AI188447, AI347511, H20618, H17420, AI332885, W22763, AI982624, AA100122, AA954893, AI735769, N25239, AI680860, AA156615, AI537693, AI143785, AA100061, AI524527, AA007162, AA625505, AI371451, H20527, AA007160, H17421, AA007161, T81126, T81079, AI086171, AA884170, AA319441, AA282548, AA482278, AA953431, AW364846, AL050021, AI365618, AC004263, T94283, N22176, N71222, AA026061, AA854747, AI472493
428	H6EAB24	866987	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2041 of SEQ ID NO:428, b is an integer of 15 to 2055, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:428, and where b is greater than or equal to a + 14.	
429	HRDFP67	867132	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a	

430	HDPPM58	867388	<p>is any integer between 1 to 341 of SEQ ID NO:429, b is an integer of 15 to 355, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:429, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2820 of SEQ ID NO:430, b is an integer of 15 to 2834, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:430, and where b is greater than or equal to a + 14.</p>	<p>AI458786, AI887533, AW390526, AW390528, AW195333, AA305871, AW390529, AA779299, AW360787, AA932904, AW081658, AI768543, AA161227, AW188432, AW022692, AA307724, AI623414, AI829401, AI572590, AI972121, AI671703, AW150744, AA308342, AA633228, AA855063, AI669455, AA161190, AA127374, AA847670, AW090023, AI520686, AW117736, AA044425, AW051743, AI339532, AA581822, AW027895, AI261519, AA873824, AW117669, AA070157, AI214974, AI265963, AI858153, AI989366, AW303893, H16931, AW151801, AI560039, AI221820, AI261495, W88481, AA862524, AA127373, AI082034, AI375974, T77484, AI973142, AI291188, AA029130, AA219277, R54545, AA448652, AA448748, AA099307, AI915901, W90061, AA810334, AA314303, AA594480, AA668520, AI040180, AI619937, AI863529, AI635285, AI811551, H20093, AA219340, AI932339, AI421285, AA233332, AA810722, F13364, AA043059, AA099817, F06571, H82160, M62189, W23152, N36230, AA877042, AA350625, H16823, R59794, R93388, AW204862, Z39554, AA639161, AI289443, AA224101, AI433218, AI872709, AI014937, AA592917, AA781575, AA705663, H45567, F10958, H91261, AA628728, AI281849, AA070256, AI267542, H45471, H22802, AI420466, AA296798, C04074, AW238960, R93389, N88473, AA906981, AA632381, AW182233, R95154, AA312474, F05926, M78191, AW118295, AA224100, AA545788, AA328674,</p>
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	R61336, AW339384, F02174, AW130994, R54447, AA296745, R65900, N38906, AI001898, AI869861, AA364250, F04495, H23008, AA860440, AA350626, AA159104, R21376, AA389643, AA361411, T35030, R38373, H90353, AA704415, T16130, T24815, R65804, H82062, AA071429, AA666309, AA232913, AW148585, AI370241, AI804738, AA030001, N93735, C03812, AA730612, AI973018, AW380044, C02275, AA248408, AI497704, AA362217, AI758396, D19826, AW389505, N46480, AA365455, C03880, AA247342, W51749, R58318, AA974143, AI880838, AW382214, AL121270, AL120853, AL048656, AI567360, N80094, AI269862, AI349964, AI345416, AI345612, AI539153, AI572418, AL079963, AI539028, AI345415, AI340582, AI909696, AL049085, AI684234, AI251205, AI612759, AW020095, AL041772, AW074459, AI364788, AL045266, AW268122, AI500706, AL045500, AI828731, AA572758, AW023590, AW303074, AW304652, AI869367, AI284517, AI633419, AL042628, AW191003, AI433976, AI620284, AW268220, AI868831, AI921176, AI950664, AI334450, AI521012, AW238730, AA427700, AI308032, AI862144, AL119791, AI433157, AI539771, AI567351, AW103371, AI537677, AI349598, AI500659, AI696626, AI815232, AJ000334, D84273, U79254, AL117583, Y11587, A08916, AL133606, AL050024, AL133093, I89947, I48978, A08913, A08910, I89931, A08909, A93016, AL050277, AL122121, AF113694, U42766, AL122110, I49625, AL050116, AF113676, AF017437, AF113677, Y16645, AF097996, AL117457, U35846, AL122050, X84990, AL133565, AL122093, AL049452, AL133640, AL137648, X98834, AF113013, I48979, AF146568, AL080137, AL080124, AB019565, AF087943, U96683, AL110221, I26207, AF118064, AF090896, AL122123,

E07361, AF113699, AL133080, AF113691, AF078844,  
AF090943, AF118070, AL110196, S78214, X72889,  
E03348, AF113689, AL137550, Y11254, I42402,  
AR059958, AL133016, S68736, AJ000937, AL049430,  
AF125949, AL050146, AL050108, AL137527,  
AF017152, X65873, A03736, I03321, AL137557,  
AL133560, AF090901, X63574, AF113019, X82434,  
AL122049, AL137526, AL133568, AJ242859,  
AF090900, AL117435, AL080060, AL133557, E07108,  
AL133075, AF158248, AF079765, AF106862,  
AL080127, AF162270, AL049283, AL049464,  
AL137459, AL117585, AF090903, AF026124, U78525,  
AL133113, A65341, U00763, AL137271, AL049314,  
AF111851, AL117460, L31396, AL050393, L31397,  
U91329, AL049466, AF091084, AF090934, AL049382,  
AL137523, Z82022, AL050149, AF113690, E05822,  
A77033, A77035, I33392, E02349, AF183393,  
AL137538, AF125948, AL133077, AF177401,  
AL137521, AL049938, X70685, Y09972, AL096744,  
AL050138, AL137463, AJ238278, AL117394, A08912,  
A12297, AF061943, A58524, A58523, I09360,  
AR000496, U39656, L30117, AL122098, AL117440,  
X93495, AL137283, AL049300, AF067728, AF118094,  
AL133072, AL110225, U80742, X96540, U72620,  
AL080159, Y07905, AJ012755, AL137476, AF104032,  
AL133014, AR011880, U67958, AF153205, AR038969,  
AR038854, Z72491, Y14314, AF111112, AF119337,  
AL133067, E15569, AL050172, AL133098, AL133104,  
X87582, A90832, AF003737, AL137556, Z37987,  
S61953, A45787, AL080074, AL137560, A93350,  
AL122111, AF026816, E04233, I00734, E02221,  
L19437, M30514, U58996, E00617, E00717, E00778,  
U68387, AL117432, AF057300, AF057299, E08263,  
E08264, X62580, AL110197, AL122118, AL137273,  
AF185576, I17767, AF118090, AF079763, AF111849,  
E08631, AL137533, AJ006417, AF008439, X83508,

431	HTAHC93	867842	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2695 of SEQ ID NO:431, b is an integer of 15 to 2709, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:431, and where b is greater than or equal to a + 14.</p>	<p>AF067790, AL137478, AF100931, AL117649, A07647, AL137480, U49908, AF132676, AF106827, AF061836, AR013797, E06743, U68233, I92592, AL133081, AF210052, X92070, AF061573, AF081197, AF126247, AL137292, AL080086, AL080158, AA159129</p> <p>AI918107, AA465241, AI828593, AI992164, AI953194, AW167788, AA132522, AA432219, AI826728, AI148029, AA259021, AA992444, AW194287, AI934757, AI765092, AI805113, AW305045, AW305046, AI739526, AL118677, AA812940, AI433078, AI990053, AW025703, AA326663, AI969123, H55994, AW075451, AA132504, AW190195, AA353370, AA299533, AA465597, AW387028, W05215, AW079170, AW364033, R39594, R39669, AA454610, AI613465, AI867236, AA515631, AA258216, AA916168, AA569591, AA612597, AA458534, AA090380, N74306, AW364034, AA092553, AA994233, AA643211, AA001471, F00906, AA078672, AA651673, F04390, AC006449, AL133659, AF075118, U07932, AF100956, AL109985, AC004093, AF109906, AF191577</p>
432	HPCRL51	867923	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 725 of SEQ ID NO:432, b is an integer of 15 to 739, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:432, and where b is greater than or equal to a + 14.</p>	<p>AA057543, AA411460, AI952878, AA702669, AW071838, AW103390, AI916698, AW130318, AA535372, AW206043, AA992806, AA427557, AA680090, AL036080, AA595148, AI968048, AI392865, AI025790, AA496286, AI560657, AA458983, AW241678, AI270725, AI003935, AW204417, AA419217, AW236215, AI933720, AA005226, AW102764, AA779900, AI275738, AW028139, T85330, AA346972, AI801715, R05480, H72246, AA609061, AI250341, AI766731, AI471307, AA411587, AC005923, AL050170</p>
433	HCRNJ44	868035	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a</p>	<p>AL040869, AA311215, AW182860, AL040043, AI954079, AW001334, W25260, AA323524, AI373179, AA904049, AI699907, AF001434, AF099011,</p>

434	HFKMJ43	868135	<p>nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 839 of SEQ ID NO:433, b is an integer of 15 to 853, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:433, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1084 of SEQ ID NO:434, b is an integer of 15 to 1098, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:434, and where b is greater than or equal to a + 14.</p>	<p>AF173156, AF099186</p> <p>AI076939, AW131143, AI547316, AW084960, AA769108, AW166982, AI922723, AI859425, AI547315, AW190185, AW189314, AI687025, AW103994, AI885578, AW167989, AI971285, AW273318, AI634376, AW103531, AI815064, AI887599, AA613656, AW085668, AI284232, AW272535, AI580226, AI758714, AW102937, AW130895, AI744795, AA485335, AI077344, AI453759, AI660446, AA662083, AA485528, AI673587, AA932540, AI660299, AI680231, AI819676, AI347214, AA769762, AA099852, AW381802, AW381808, AA827002, AW394192, AA974186, AA635998, AI360433, AA515323, AA932698, AI631419, AI475522, AA576781, F20462, N88483, AI884333, AW372362, AI266687, T47132, R54786, AW130809, AI914926, AW085843, C01770, AW392791, T58370, T47131, AA349222, AW173742, AW391615, AI284877, AA974427, AI537745, AW439296, AW392770, F37677, AA317949, T69376, AW050884, AI690506, AI612866, AI282235, AA485371, T58420, AA485492, R54976, AW392430, AA303595, D31427, AA582345, AA569064, AA299677, AA568373, AA349268, AW083669, AW087282, AW075780, AA099975, AW105580, AI915084, T69301, AA335651, AA304122, AI874164, AW166667, AW381330, AA641428, AI814814, T74185, AI422498, AA662119, AI914688, AW364262, AW394256,</p>
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435	HMSFS13	868173	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1164 of SEQ ID NO:435, b is an integer of 15 to 1178, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:435, and where b is greater than or equal to a + 14.</p>	<p>AW387219, AI687588, AI079092, AW394196, AI745502, D28137 AA203497, W80594, W78988, AI051174, R10941, AI240722, H47056, R10890, H47128</p>
436	HCRQH59	868224	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 672 of SEQ ID NO:436, b is an integer of 15 to 686, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:436, and where b is greater than or equal to a + 14.</p>	<p>AI005034, AI560993, AW149100, AW207031, AI188497, AW295548, AW250814, AW327945, AI745194, AA922333, AA629893, AA400153, AI027600, W58447, AA813400, AA746206, N80927, W76342, AI139801, AA828177, AA451805, AI682025, AA676942, AW375643, AI279610, AI743371, AI359755, AI276499, AA444123, AA443944, AA196359, AA569017, AI086189, F37015, AA454013, AI089230, AI632987, AI367703, AI338403, AI262825, AI445623, AA767495, AI241535, AW004973, AW009042, AA453635, Z41848, AI094343, F22096, AA923598, AW080667, AA833987, AA441932, N73089, AA548624, F04870, T30813, F10561, AI342923, R37034, R39180, AW058509, AW440500, T35208, T17396, AI720047, AA197182, W58482, AI797280, AA426126, AW363378, T19458, C21530, AA090309, R34367, W74362, AA46271, T61317, AW407104, N71508, AA075086, AA703101, AA383602, AI371957, AA192312, N22129, N91820, AA374751, F24684, AA213591, AA813578, H97310, H43284, C00318, T10425, AA369853, AA349688, AL035405 AI056268, AI343372, AI139495, AI027361,</p>
437	HHFIU87	868655	<p>Preferably excluded from the</p>	

			present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2574 of SEQ ID NO:437, b is an integer of 15 to 2588, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:437, and where b is greater than or equal to a + 14.	AI924719, AA316121, AA708610, AW084101, AI660874, W23031, AA316032, AW087171, AI491951, AA147574, AA044040, AA057458, AA258433, AA258473, AA099664, AI217722, H05694, AI217720, AA447181, AA665778, AA994652, AI401464, AA043987, AA323852, R23442, AA303874, AI206793, AA588294, D83890, AA460097, AA373101, AA603138, H08671, AA328895, AA653915, AW367071, AI439142, AI932561, AA343108, AA248906, AI783947, AA249549, AA249413, AA923343, AL137965, AW008330, AA091278, AI298571, W47605, AI306526, AI216520, AA442219, N56755
438	HFIU59	869698	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 3595 of SEQ ID NO:438, b is an integer of 15 to 3609, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:438, and where b is greater than or equal to a + 14.	AI637846, AA887146, AI923869, AW130105, AI828950, AA706813, AI567142, AA496218, AA504266, AI796787, AL120830, AI768215, AI923290, AA307624, AW265423, AI432594, AA846683, AW023377, AI149750, AA830707, AI130755, AA831941, AI813474, AA310261, AA493149, AI352195, AI278643, AA418838, AA252591, AA449177, AI432141, AA099899, AW196997, AA748185, AI359815, AA476504, AI680167, AA989123, AI439476, AI740988, AA641927, AI743769, AA102103, AA307883, AI270331, AI660051, AA429154, AI371979, AA418927, AW316913, AA740707, AA811144, AA252204, AL120914, AI358187, AI088116, AA618550, AI005413, AA746019, AA744831, AA251764, AA765289, N22214, AI245654, AI288125, AI521023, AI440049, AI439066, AW020264, AA828338, AA745277, AI041495, AI453701, AA447164, AA428995, AA251920, N64152, AW023222, AI863738, R33968, AA835823, AA488982, AA489057, AA351905, AW021986, AW192667, AA579266, N68141, AA580976, AA830209, C02334, N68217, T39203, AA356883, AA369952, AA193552, AI915727, AA371504, AA443792, AA353796, W07214, T40474,

439	HBKDR59	870190	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2629 of SEQ ID NO:439, b is an integer of 15 to 2643, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:439, and where b is greater than or equal to a + 14.</p>	<p>Z20878, AA508477, AA115114, AA114981, AW197922, AI572933, AA379201, AW265622, Z75331, AJ002636, L08437</p> <p>AW409651, AW001436, AI766185, F24711, F30562, F18895, F33224, F20809, AW290901, AA112814, F30649, F24516, F36239, F32390, F24189, W65464, F20910, F24946, F19577, F27754, AA393845, F21414, F35959, F24144, F19544, AA086252, F31787, F34043, AW136769, AA346256, F01249, AA194339, F34580, W65465, F18803, F24518, AI380655, AA112964, F32973, F24338, AA196236, F25919, AI520948, AW073292, F00875, F37952, AA706041, F22333, AA102288, F30139, F19529, AI873673, F32933, AI580424, F22119, AA176956, AA197011, AW196341, AW393804, AA213963, AA907940, AA179063, F23562, F17271, F34144, F18206, F35373, F32260, F17119, F20182, AA197042, F17627, AA193202, AI984748, F33521, AW003263, F22260, F33351, AI656164, AA211514, F16602, F35945, AA211757, AA179234, F16358, AA112845, W42981, AI126989, W42982, AA179064, F33500, F31725, F36387, F27742, AA321749, F00003, AA178967, AI038202, F23383, AA321748, F31776, AI972778, AA196264, AI365102, AA194347, W21136, F27722, F28315, N93730, F00478, AA194398, H14052, M99223, M12898, M26064, X63009, J04703, X02814, X52496, U96781, Y18063, M25267, AF043106, X15635, J04024, J04022, J04023, AJ223584, AJ131821, M30581, U49394, U49393, AJ131870, X67140, U96780, M15158, U96779, M15351, AF091853, M20532</p> <p>AA280720, AA505108, AA605272, AW269504, AA603315, AI635279, AA582073, AI962030, AA708103, AA584125, M77893, AI311276, AI254779, AA847499, AW146507, AI345891, T54600, AA687730, AA502843, AI821608, AA280427, AA811208,</p>
440	HTHCZ54	870349	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a</p>	

<p>is any integer between 1 to 623 of SEQ ID NO:440, b is an integer of 15 to 637, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:440, and where b is greater than or equal to a + 14.</p>	<p>AA137013, AC004526, AC005879, AC002563, AL022319, AC002352, AC007563, AC005072, Z83843, AC007298, AC004386, AL031584, AP000036, AC002432, AC004491, AL049539, Z84466, Y10196, U85195, AC000353, AC006312, AE000658, AC002565, AL035461, AC004002, Z82190, AL031767, Z83819, AL121754, AL031666, Z83822, U95743, AC005726, AL035684, AL096701, AC007314, AC008064, AL050321, AC003950, AL049709, AL109984, AC003957, Z93783, AC005209, AL133243, AL031058, AC007387, AL132987, AL022345, AC005670, AC005081, AL009172, AC007386, AC009044, AC005859, AC003037, AC004963, Z84469, AC005829, AC006360, AL117338, U95740, AC004554, AC002990, AF001550, AC005197, AC004887, AL008732, AL034419, AC005808, AC005094, AL049780, AC002416, AC007360, AF001548, Z93020, AL139054, AC002302, AC007227, AP000501, AL031273, AC007685, AC006001, AC011422, AC004087, AC006960, AL031283, AF053356, AP000513, AL049776, AC004098, U91321, AP000014, AC007226, AC005082, AC002288, AC007684, AL050318, AC003046, AL121652, AF196972, AC007842, AC007637, AC004805, Z99127, AC003101, Z98949, AC004132, AC007390, AC004032, AC005277, AC002554, AC004216, AC012384, Z99716, AC002349, AC005914, AC007216, AC006121, AC006116, AC005823, AC005071, AB023048, AC008116, AC008372, AF130343, AL049778, AC005048, AC008115, AC000004, AL050350, AL049779, AC006111, AC005015, AL022163, AL021528, AL030996, Z97053, AL035071, AC002470, AC007172, AC004890, AC004876, AF205588, AC003029, AB020866, AL133448, AL031230, AC000025, AC005920, AC002350, AC005933, AC004253, AF015262, AC006317, AL031602, AC008125,</p>
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441	HWABV82	870419	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2581 of SEQ ID NO:441, b is an integer of 15 to 2595, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:441, and where b is greater than or equal to a + 14.</p>	AC006571, AC008009, AL031003, AL022237, AC003684, AL031681, AL035423, AC005972, AF064858, AP000208, AL024507, AP000557, Z97054, AJ229043, AJ010598, AL031848, AL031123, AC006958, Z94056, AP000099, AF109907, AC002400, AC007193, AC005304, AL136295, AC005484, AC005899, AC003003, AL049757, AL133246, AB023049, AP000553, AC004771, AP000011, Z84484, AC005342, AL031224, AC002418, AC002375, AL035555, AP000247, AC000118, M89651, Z81314, AC005004, AL022395, AL133355, AP000692, AC000035, AL022721, AC005837, AC005280, AC004953, AL050332, AC004659, AL022329, AC005031, AC004223, AC005325, AC005778, AL023913, AC006538, AC005088, AC007157, AC005095, AC005049, AL049650, AC004883, AL031297, AL031433, AC009516, AC007384, AC004552, AC004615, AP000130, AC004921, AC011311, U07562, AC002299, Z83844, AC005520, AC005771, AC005102, U29895, AC006064, AC004518, AC004408
				AW131725, AW051778, AI669187, AI423040, AW150328, AI264242, AW249495, AW190050, AW438903, AW338652, AI625770, AA411440, AW051369, AI954048, AI572603, AI884403, AA994684, AI870488, AI816134, AI689595, AI590389, AW157537, AA147092, AW051768, AA865624, AI032419, AI688335, AI553828, AI452805, AA772163, AI758329, AA627389, AA700483, AI554272, AW250260, AI017045, AA557144, AI830027, AA670344, AA431551, AW369367, AW402702, AI936035, AI338886, AW129438, AA576444, AA724592, AA890524, AW369322, AW130853, AI149018, AA70195, AW190197, AI697373, AW369320, AA847288, AW369369, AA847245, AI038158, AA577609,

				AA601940, AW205121, AI141907, AI869702, AA731344, AI128741, AI288581, AA233156, AI366687, AI834242, AW363558, AW406637, AW001981, AI361102, AA857855, AI073592, AA622202, AI093763, AA594450, AW068510, AI538596, AI120386, AA159922, AI123208, AA854132, W48791, AA725251, AA233232, AW390347, AA687609, AI696346, AI858437, AI061262, AI810395, AA983511, AI190304, AA576990, AA722843, AI523184, AI369749, AI120506, AI344375, AW068772, AA977264, AA025994, AA693398, AA305354, AA431097, AI860056, AW058630, AA706704, AA159304, AA633069, AI052053, AW408599, N41444, AI357292, AA305432, AW369383, W81209, AA009433, AA554141, AW369334, AW369372, AW403131, AA226840, W49616, AI206517, AW402978, AI766707, AI354629, AI206804, AA233115, AW082751, D20039, R96149, AA781650, AI906402, AW369378, AA158005, AW176662, AA037067, AI471469, AI214071, AI128438, AW369363, AA243693, AA025935, AA470742, N99045, W38348, AW198136, AI244933, AA152400, AA251742, T63645, AA843429, AI198270, AW387283, AI014806, AA147149, AW387279, AI244494, H05246, AI909741, AA068995, AW363552, H63348, AA873311, AI909742, AA972595, AA723485, N69416, AI750309, AI831979, FI1143, AI758210, AA953204, R14402, AA009432, AA130321, N69871, AA937997, AA676328, AW391004, AI834227, C75028, AI375745, AA318159, AA523040, AA359700, AA282110, AW176551, F02163, AI909763, AI221319, R55808, H63268, AW439092, AW376794, AW376722, AA648692, C17923, AW376787, AW376790, AW376808, D58666, H67217, AW376586, AW376634, AA526169, AW376602, AW376608, AW376670, AW376710, AW376766, AW376594, AW376648, AW376723, AW376797, AW376835, AW376556,

442	HACAC44	870522	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1287 of SEQ ID NO:442, b is an integer of 15 to 1301, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:442, and where b is greater than or equal to a + 14.</p>	<p>AW376626, AI648622, AW376669, AW376598, AW376664, AW376793, AW376589, AW376727, AW376742, AA640192, AW381440, AW369361, AW376746, AW376535, AA533573, R96150, AA811996, AA731346, AW376611, AW376673, AW376763, AA101026, F04541, AA340614, AA321525, J05021, X51521, X60671, M98498, AB019790, M69066, AF004811, M86450, X67788, AF187552, AF189213, AF188897, AF188896, AF190059, Z98946, AF199015, A74971, R14107, R34799, R39976, R55893, H24380, H25198, H43742, R83627, N91447, AA027254, AA027255, AA130320, AA282111, AA524127, AA635688, AA092681, C16922, C17290</p> <p>AA732468, AL043018, AI963433, AA622251, AI560190, AI749581, AW362457, AW024461, AW362418, AW362459, AA307460, AA172081, AW238430, AI432197, AI400045, AI348099, AI122666, AI084503, AI097199, AA773420, AI924870, AI683453, AW272288, AI688599, AW151065, AI683437, AW236325, AA127600, AI832424, AI961261, AA191492, AA521001, AI609275, AI539701, AA059128, AI339621, AA164246, W88688, AI940790, AA280189, AI890492, AA971521, AA487487, AA113967, AI796636, AA113975, AI093771, AI565099, AI300916, AA828550, AW024650, C75515, AI127502, AA583210, AI356105, N69680, AA155887, AA425071, AI082618, AW379685, AI700320, AA490212, AI082422, AW024237, AA311880, AI391733, W25209, AA503796, AA826830, AW004688, AA234784, AW029114, AA533723, AI333989, AA765216, AI640715, AI140928, AA233104, AA488627, AA773596, AA410203, AW276104, AA121490, AA076138, AA243663, N55366, AA843816, AA487701, AW238392, AI589674, AW082650, AI703364, AI393774, AI678005, AW129343, AI351973, AA186694,</p>
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	AA631585, N77372, AW264693, AI708579, AA828168, AI253752, AA713617, AI241364, W88674, AA856622, AW339674, AI468454, AA761035, AI333948, AA608978, AA443223, AA121713, AI206558, AA602373, AI689903, AA315934, AA410202, AA885774, AW166954, AI354371, AA136561, AA609596, AI399856, AA644641, AA234716, AA961145, N95265, AA157306, AA769568, W30735, AW366445, T32410, AA076477, AW005205, AA749169, AA076366, AA886604, AI364350, AA443186, AI676079, AA477998, AW173591, N77197, AA610283, AA160755, AA486003, AA172058, AI498678, AI525518, AI469612, AA088329, AI091940, D53760, AA263044, AI274460, AI274131, N98217, AW401383, AA804255, AA364669, H24015, H47488, W99326, H67134, AW366443, AI688781, AI337543, Z25111, H81437, T32288, AA506289, R05982, AA291673, AI080264, AA932552, AI630479, AI864043, AI141097, AA169887, R49573, AI802015, AA129546, AA716523, AA235675, AA852685, T57818, AI554824, H72387, W99368, C04264, F00249, AW196727, AA322105, AA383944, AA830133, AA307781, AW015462, AA065104, C15726, AW236193, AA773340, AA236891, AA169574, AW007217, AI693662, AI383858, AI799525, AI459817, AA876959, AW273655, AA565893, AA064854, AI634280, H10400, AA665643, W04304, AA782912, AA076178, AA887175, AA352861, AA296629, AA887148, AI471562, AA367055, R81881, AW205111, AI630377, AA253256, AW392331, AA677481, D53759, AA342591, AA759048, AW243664, H10608, AI344490, AA626582, AI458916, AI630327, AW419306, AA088330, T16764, AA155839, AA922958, AW300747, AA281564, AF054174, AF058445, AF044286, AF041483, U79139, M99065, AF171080, AF123312, AF171081, T82377, AA083755, AA112072, AA190752, AA913216, AA968487,



443	HDTLE81	870896	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 675 of SEQ ID NO:443, b is an integer of 15 to 689, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:443, and where b is greater than or equal to a + 14.</p>	<p>AA653986, AA477999, AA773883 AA313716, N57369, AA295283, AL133355</p>
444	HSWBU77	871071	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 381 of SEQ ID NO:444, b is an integer of 15 to 395, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:444, and where b is greater than or equal to a + 14.</p>	<p>AW401754, N51433, N52178, AI160836, AI150956, AI380317, AW005566, AI201735, M78012, AI636693, AI221560, AI189814, AI269161, AW404116, AI832378, AI783604, R71999, AI914007, AW275795, N80554, AI718609, AI718645, T36255, AW001003, AI206919, F18021, AI141711, AA450045, AA922786, F30202, AI056913, AA707747, AI185990, AI627222, W19286, AA224759, AI863594, AI890468, AW189371, AI743409, AW169124, AA226254, AI049994, AI913167, AI095206, AL079447, AI025355, AI251360, AW148964, AA879022, AA425283, AW085751, AA352518, N98622, AA659190, AI084648, AA180815, AI557808, AI360368, AA393333, N99919, AI859618, AI114543, AI057560, AI267285, AA604323, AL047306, AI907506, AW168734, AI446424, AI445793, AL041375, AA769530, AI880770, AI086603, AI039440, AI433952, AI818921, AI754064, AI917658, N68677, AA167178, AW022704, AA513196, AA326398, AI754926, U95739, AC005081, AP000260, AC005829, AP000036, AC002316, AC005562, AP000099, AL049557, AL132985, AP000359, AC007225, AC007172, AL133243, AC004686, AC007425, AP000213,</p>

	AP000135, AC005696, AP000031, Z83840, AL049539, AL022724, AF030453, AC005516, AL121934, AL031433, AC004448, AC005088, AC006120, AC003029, AL021878, AL022723, AC003663, Z97634, AF205588, AC004069, AC003101, AC007073, U47924, AC006511, AC006241, AL133448, AC007666, U91326, AC004797, AC005695, AF130247, AP000350, AC005412, AC002430, AC004099, AL109827, AC006353, AC005225, AC007384, AC003688, AC004019, AL008582, AC000052, AC006211, AL031681, AC005911, AF047825, AC002558, AC007917, AC010200, AP000553, Z82198, AL022326, AC002059, AC007221, AC004520, Z82206, AP000547, AL035454, U52112, AL021918, AC004883, AC002394, L44140, AL031651, AF196779, AC005279, AC002997, AL079305, AC005037, AC006449, U91327, AC005372, AC003010, Z82244, U66059, AF184110, AC005684, AC004685, AC003109, AL022318, AC007292, AL022327, AF207550, AC007277, AP000208, AP000130, AL049553, AL117340, AC006112, AL021707, AL035420, Z83844, AP000247, AL121915, AL135879, AL121790, AL031721, AC006023, AL031281, AL034379, AC007012, AL132642, AL035398, AC005480, AL050321, AL049757, AC005790, AC005018, AC004804, AF057140, AC008040, AL096701, AC004884, AC004213, AC004859, AC002472, AC007676, AC006057, AL132712, Z82208, AC006597, AC004231, AL035411, AC007055, Z93931, AC007686, AC005899, AC006059, AC004752, AL034548, U73647, AC007157, Z98304, AC007993, AL032821, L48038, AC004148, AC002289, AC005180, AC007298, AC004659, AC002996, AC005206, AC003950, AC005212, AC007878, AC020663, U91323, AC007371, AF124523, AP000689, AL020997, AC002565, AL021391, AC004908, AC006064, AL031311, AP000503, AC007021,

445	HWACJ61	871225	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1544 of SEQ ID NO:445, b is an integer of 15 to 1558, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:445, and where b is greater than or equal to a + 14.</p>	<p>AC006441, AC007537, AC005365, AC005215, D84394, AC002504, U63630, AL031775, AL023584, AC005358, AF111168, AC006111, AR036572, U91328, AL035407, AC004837, AC012085, AC005667, AB003151, AF134726, AL031767, AL035455</p> <p>AI913998, AA128064, AA480228, AW440835, AI336571, AW299768, AI906358, AI906367, AA326115, W68756, AI207161, AL048182, AA552921, AA932082, AA622156, AF080158, AR067807, AF031416, AF088910, AF026524, AF115282</p>
446	HKLSC04	871428	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 3071 of SEQ ID NO:446, b is an integer of 15 to 3085, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:446, and where b is greater than or equal to a + 14.</p>	<p>AA701667, AI435854, AA811453, AI268375, AA741050, N68502, AA748037, AI809498, N40363, AA731507, AI806279, AF150208, AI082190, AI244194, AA946684, AA825325, AA946679, AW292592, AI832023, AA608679, AA287961, AW117937, AA280917, W44635, AA743100, AA911245, AW151588, AA286954, T75259, AI952240, AA977013, C14333, AI762840, AI370846, R88105, AA441979, AW376287, N48804, AI458457, AW241912, W44586, D81095, AA506419, C14239, N27548, AA878217, AI735679, AA767790, AA721375, AA995689, R97283, F13495, AA470494, AI799114, AA057788, AI417709, AA904355, AI128599, AI557555, D59635, AA047606, AI218107, AA527592, F10488, AA364204, D80152, H54332, AI760595, AI074719, AW080845, H54122, AI694001, AI718622, N87996, H21903, AI382742, N45595, H45479, AW019947, AA743131, T93311, AA807044, AA492324, AA729134, D80364, AA005207, D59993, AI832370, AW302371, H65224, AI423823,</p>

447	HCRPM84	871498	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1903 of SEQ ID NO:447, b is an integer of 15 to 1917, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:447, and where b is greater than or equal to a + 14.</p>	<p>AA908689, AI719952, C02342, AA923093, T93988, AA005208, N22641, AA688340, C14240, AA470961, R97047, AW183246, D80151, AA587961, AA688339, D81228, AA156735, AA625352, H21782, AI909028, H45478, AI610412, AW295861, AA045905, AW193243, T63765, H21691, AA490197, AW237053, I95754, AA629148</p> <p>AA614743, AA315930, AW327829, AW327869, AA838465, AA028992, AI028728, AW014945, AI619612, AA182764, AI675491, AA927929, AA030010, AA368382, AA993714, AA236575, AA234605, AA448866, AA460089, AW014951, AA430225, AF151908</p>
448	HLHGG41	871732	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 932 of SEQ ID NO:448, b is an integer of 15 to 946, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:448, and where b is greater than or equal to a + 14.</p>	<p>AI435382, AI149854, AA747434, AA410696, AA130455, AA669118, AI954884, AA776480, AI220980, AA281474, AA182634, AW410911, AW410948, AI127902, AW410464, AI922064, AI866551, N29646, AA919157, AA058503, AA135645, R01159, AA991193, R10880, AI095663, AI147358, AA886215, AI130958, AA622039, AA593877, AI199828, AA534396, AI075283, AI138468, AA632319, AI129513, AA516111, AI636835, AA101571, AA574071, AA532871, R08363, W81083, R05769, AA190784, H95250, W80980, AA608850, R10929, AA151035, AI219126, AA235490, H95261, AI247268, AA490668, AA054462, AA487878, AI142364, AF038957, AF068117, AF047695, U01137, AF068116</p>
449	HVLNH36	871756	<p>Preferably excluded from the present invention are one or more</p>	<p>AW188092, AI743960, AW019908, AI743675, AI554932, AW130209, AI400570, AI873626,</p>

450	HKAAC09	871821	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1176 of SEQ ID NO:449, b is an integer of 15 to 1190, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:449, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 901 of SEQ ID NO:450, b is an integer of 15 to 915, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:450, and where b is greater than or equal to a + 14.</p>	<p>AI635163, AA630087, AA773835, AI745307, AI681992, AI769214, AI452846, N26651, AI942419, AA931054, AW020889, AA330667, AA199908, AI080379, N50936, AW051252, AA774703, AA371288, T55202, C18915, AI183818, R23104, AW029363, C16828, R63546, R63500, C18924, D78829, AW023362, H42585, H52313, N79874, AI560593, AI445518, AA773693, R58570, AI873772, AC006501</p>
451	HLHAR50	872327	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1848 of SEQ ID NO:451, b is an integer of</p>	<p>AI347928, AW162145, AI826327, AA716088, AI184237, AI221566, AI380301, AW162264, AI827001, AI738731, AI214206, AA778211, AA906997, AA309127, AW250315, AA662918, AA948191, AA132478, AA205866, AI291182, W58281, AW247709, AI879612, AI369761, W58282, AI493532, AW271688, AA215359, AA219692, AA113943, AW247263, AI357687, AA486007, AA026482, AA216703, AA223598, AA132567, AI936143, AA227341, AA181792, AI457253, AA206169, AI203342, AI206171, AA862491, AA459453, AA223374, AW160761, H83366, AA223240, AI541341, R27894, AW160535, AA088771, AW248039, AW370950, AA216698, AW370982, AA642560, AA034208, AA216670, AI918853, AA218599, AW403164, R27802, AI695455, AA121619, AA101550, AA196719, AA205783, AI879230, W21295, AA220914, H83713, AI200082, AI834288, AA554247, AA223124, AA205631, AI583365, AA026321, U64033, AC008055, AW263849, AI302362, AI750848, W63796, AA378447, T79005, AA310337, AA304273, AA152264, AI146404, AA056005, AA359249, AI659163, N46657, AI671309, H87391, AA358696, AF146793</p>

452	HSKJB43	872354	<p>15 to 1862, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:451, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 786 of SEQ ID NO:452, b is an integer of 15 to 800, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:452, and where b is greater than or equal to a + 14.</p>	<p>H08008, AA557825, N46310, N78001, W40214, AA249780, AI888301, H81476, T82657, AA557753, AW393136, AW451242, AI742939, AW051293, AA682604, AB011149, D78303, E13890, AF144731, E13891</p>
453	HNSMB24	872535	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2092 of SEQ ID NO:453, b is an integer of 15 to 2106, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:453, and where b is greater than or equal to a + 14.</p>	<p>AA534591, AW104113, AA922301, AA528179, AI978874, AI251446, AW193752, AI686794, AI469095, AA883068, AI865738, AI733856, AA410788, AI755214, AA847499, AI754567, AI754105, AA832145, AI683116, AA228778, AI923052, AA225406, AW328331, AI056177, AI249688, AI609972, AW419389, AW023111, AL135377, AI457597, AI017251, AI669421, AA176978, AI697425, AA704393, AA630854, AI693979, AA579152, AW272294, AA524616, AA644090, AL079734, AL118925, AW131356, AA610433, AA503019, AA535216, AI687343, AI038304, AI049955, AA584484, AI635028, AA536040, AA456924, AI537800, AI049630, AA568314, AA176604, AA169245, AW265688, AA583386, AI887235, AI792464, AI569100, AI446452, AW327624, AW192599, AA721645, AI923451, AW148507, AA838091, AA809125, AI311647, AI793172, AI793209, AI141130,</p>

	AL043105, AA579130, AI345695, AA572813, AA127222, AI080307, AA601278, AA772906, AI380617, AI696955, AA773463, AA177011, AI755202, AW237905, AI612142, AI627614, AI160786, AI066646, AL119691, AI452836, AA601356, AI350211, AI923458, AL037714, AA493708, W96522, AI053784, AA737309, AI078409, AA720774, AI613280, AI279417, AA772704, AI683513, AA558404, AC005225, AL035450, AC002558, AC006480, AC004883, AC005081, AC003071, AL035587, AL031311, AL049758, AC002492, AC005409, Z86090, AC002504, AL022165, AF113694, AC005088, AL109967, AC005953, AC006115, AL121603, AC004383, AC007011, AL022319, AC005519, AL035420, AF124523, AP000045, AC007225, AC005015, AC003689, Z82206, L44140, AC005231, AC007055, AC005962, AC005562, AP000557, L78810, AL049694, AC007216, AC004673, AL035405, AL050318, AF134726, AC016830, AC007172, AC006441, Z83844, AC005520, AL031680, Z93017, AC004797, AC006088, AF030453, AL080317, AC007277, AC005726, AL078638, AC005243, AL035460, AC006965, AL049749, AL022315, AP000144, AC005500, U91319, AC005295, AC005399, AC006141, AC005291, AC007191, AP000952, AL096678, AC005668, AP000208, AL049757, AC005527, Z98884, AC005670, Z84466, AC005514, AL021155, AC007298, AC005821, AC007637, AC006530, AL133216, AP000247, AC007193, AC006449, Z83733, AC004686, AC005740, AC007731, AF001548, AC007546, AC004125, AC006287, AC004996, AC005102, AL031228, AC007536, AC005207, AC005696, AC004079, AJ003147, X87344, AC004859, AC005971, AC003070, AL049843, AF042090, AC005940, AC002326, Z98745, U96629, AF196779, AC006077, AP000152, AR036572,

				AC006285, U51244, AC006511, AC004821, AL049636, AF045555, AP000503, AC000025, AC006121, AC012384, AC007676, AL020993, AC002310, AC004987, AC002456, AC007774, Z98304, AL033527, AC002350, AC002551, AC002073, AC006111, AP000113, U91325, U62317, AL022318, AC007283, AL133448, AC004834, AL031283, AC006023, Z97054, L47234, AL022476, AL021453, Z99128, AL021393, AC005663, AL020997, AL133163, AC004551, AC006211, AC004655, AL022723, AC004815, U80017, AC004491, AL031729, AC005060, AC006942, AP000065, AL035659, AF118808, AC004019, AC007686, X55448, AC008372, AL009031, AL035697, AC005529, AC004832, AC006139, AC006241, Z68870, AC003690, Z99297, AL022238, AF146367, AL078593, AC004878, AC005048, AC008041, AC005736, AC006328, Z98742, AL049830, AF205588, AL035249, AC003029, AL031281, AL117329, AC000385, AP000547, AC005330, AC000111, AP000240, AC006501, AC005031, AC002369, AL021918, AP000130, AL035407, AC005089, AC006059, AL121820, AC003950, AC004408, AC008115, Z95115, AC002302, AC006430, AC007993, AC004975, AL109798, AP000338, AF091512, AC006117, AP000347, AP000193, AC005695, AC005332, AL049643, AC002059, AL049869, AF031078, AC004905, AC016025, AL122020, AL031846, AP000216, AL021391, AF148461, AL109627, AC005778, AL031295, AC004227, AC005175, AF053356
454	HAJAN23	872551	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2274 of SEQ ID NO:454, b is an integer of	AI949422, AI423046, N31952, AA465612, AI564487, AW195192, R88931, AA658285, AI740792, AA641596, AA313322, AW418507, AI949987, AW194161, AI869038, AW274192, AW301409, AW071349, AL038605, AW303152, AL121365, AI702406, AW243485, AL040243, AL135661, AI868831, AI608667, AI687728, AW162071, AI440239,



			<p>15 to 2288, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:454, and where b is greater than or equal to a + 14.</p>	<p>AI433157, AI440426, AL119748, AL036146, AL047763, AL047042, AL046849, AI349772, AI340582, AI857296, AI818683, AI433976, AL121270, AI349645, AW071417, AI635461, AL045500, AI436456, AI863014, AI475371, AI500077, AI538716, AI064830, AI567351, AW074993, AI521012, AW268253, AI312152, AW117882, R89611, AI349937, AI281779, AL036980, AI469532, AW089572, AI697137, AI815383, AW103371, AI349004, AI250293, AL036802, AI568870, AI564719, AI934036, AI679724, AI540832, AL036396, AI866608, AI345735, AI349933, AI873731, AI625079, AI580190, AI207510, AL119791, AI119049, AI249257, AI282655, AI690751, AW169653, AI343112, AI673256, AI349256, AI687376, AI499393, AL040169, AI686926, AI251485, AI699857, AW238730, AI597918, AI445432, AI439745, AW195957, AI499131, AI439087, AI920968, AI678302, AI275175, AI633419, AI446606, AI285735, AI802542, AI497733, AI631107, AI889203, AW068845, AI590128, AI758437, AI969601, AL120854, AI610307, AI609592, AI583316, AI500553, AW104724, AW148320, AI620284, AI866780, AI687415, AI609580, AI636456, AI919058, AA640779, AL121463, AA613907, AL036759, AL120736, AI690835, AI635942, AI568854, AI567632, AI597750, AI696398, AA572758, AI906328, AI366549, AI671679, AI800453, AW166645, AI498579, AW080838, AI753683, AI349614, AI696846, AL038778, AL036240, AI348897, AI224992, AI281773, AI680113, AI874109, AI613017, AI349598, AI952114, AA585422, AI800433, AI340519, AI969567, AI702433, AI907070, AI475134, AL036274, AI539771, AI811863,</p>
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AW235035, AI889839, AI800411, AI687362,  
AI921379, AI307466, AI366991, AI612913,  
AI499463, AW301300, AI434281, AL038779,  
AI345131, AI862142, AI866002, AW167776,  
AA508692, AI568855, AL047041, AL036260,  
AI270055, AW302965, AI445025, AI628205,  
AW074869, AI334902, AI818206, AW026882,  
AI269696, AI813914, AW132121, AI909666,  
AL043326, AI492540, AW087445, AI909662,  
AI561254, AI536685, AL036247, AI866887,  
AI610645, AI345744, AI271786, AL048871,  
AI799305, AI343059, AI500659, AL044207,  
AI349226, AI687375, AI682841, AW183130,  
AI569616, AI687127, AI471712, AI811353,  
AI620868, AI619502, AW166970, AW075351,  
AI859733, AL121014, AI309401, AI345860,  
AI907061, AI493248, AI624859, AI312542,  
AI274541, AI149592, AI281762, AI862144,  
AI580984, AL119828, AL079298, I48979, AF090900,  
AL110221, AL117460, AL049452, AF113694, Y11587,  
AF090901, AF090903, AL133016, AF113013,  
AF078844, AF113690, AJ242859, AF090943,  
AF125949, I89947, AF113691, AF090934, AL133640,  
S78214, L31396, L31397, AF118070, AL050393,  
AF104032, AL133606, AL080060, AL110196, A93016,  
AL050146, AF118064, S68736, AL117457, AF113676,  
AL137527, AL049938, AR059958, AL050149,  
AL133075, AF113689, AL050116, U42766, X84990,  
AL122093, AF106862, I89931, A08916, AF090896,  
AL050108, AL122050, AB019565, AF113677,  
AL133557, A08913, AL049466, AL049314, AF113019,  
AL096744, AF017152, AL080124, AL137283,  
AL133093, AL133080, AJ000937, I48978, AL080137,  
E03348, AL050277, AF158248, Y16645, AL137459,  
AF113699, AF111851, AR011880, AL137557,  
AL122121, AL133565, AF125948, Y11254, X63574,

455	HWBAP55	872640	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2347 of SEQ ID NO:455, b is an integer of</p>	AL049430, A65341, AL122123, AF097996, E07361, AF146568, AF091084, U91329, AF177401, AL117394, AL050138, X82434, AL110225, AF079765, AL133560, AF017437, AL117435, U00763, AL137550, I49625, AL117583, Z82022, AJ238278, AL049464, AL117585, AL049382, E02349, E07108, S61953, AL050024, A08910, A77033, A77035, AL049300, AL122110, X72889, AL137271, A58524, A58523, X70685, A08912, I33392, A03736, AF118094, AF067728, AL122098, AF183393, E05822, A08909, AL133113, AL137538, AL049283, A12297, AF061943, AL137648, X96540, AL137463, I03321, U80742, X65873, AL137533, AC006371, AL137521, X98834, X93495, AF091512, AL137523, U35846, AC007390, AF087943, AL110197, U72620, AL080159, AL080127, I09360, AC002467, AC004690, AL096776, AF111112, U67958, L13297, AC006336, Y09972, AL137476, I42402, A93350, I26207, AR013797, Z37987, AL133568, AL137560, AF119337, AL133104, I00734, AF026816, E08263, E08264, I66342, E00617, E00717, E00778, AJ012755, AF153205, AL133098, AC004093, E15569, I17767, AF026124, AF000145, AL133072, AR000496, U39656, M30514, AL078630, AL122049, AC007172, A07647, AC006840, AL122111, AF057300, AF057299, AF061981, AL050172, AF079763, X83508, AL035067, AL133077, AL133014, AF032666, A08911, AL110280, AL137526, Z72491, AF210052, Y14314, AF003737, AF106827, U01145, U68233, I92592, AF100931, AC004686, AC007392
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456	HE2IO26	872655	<p>15 to 2361, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:455, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 943 of SEQ ID NO:456, b is an integer of 15 to 957, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:456, and where b is greater than or equal to a + 14.</p>	AA432112, AW302562, AA868849, AI439363, AI143642, W56777, AA921899, AI978704, AI806769, AB011118  AA774247, AA854167, AI805560, AI809094, AI435792, R32283, AI805377, AA424984, AI201302, AA496005, AI272119, AI689410, AI087276, AI432665, AA808128, AI217149, AI432925, AA886713, R32295, W90075, R67703, H43148, W90193, AW241343, R53752, AA582409, H42383, AA001927, AI698619, AA846430, AA358327, AA307239, R53753, R66100, AA743679, R32338, R32329, AA358326, AI400677, AI289490, AI061323, AF055470
457	HEGAK44	872802	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 909 of SEQ ID NO:457, b is an integer of 15 to 923, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:457, and where b is greater than or equal to a + 14.</p>	AI290719, AI291944, AA805765, AA805772, AI041370, AA641820, AA443285, AI094486, AW016500, AI824161, AI800755, R77005, AI804547, AA831888, AA351612, R90900, AI868814, N67801, AI025758, AA385970, AA725760, N20006, AA587003, AA321819, AA336510, AA743304, AA782472, AA709276, H28173, AF091088
458	HOGCK09	872852	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 3044 of SEQ ID NO:458, b is an integer of</p>	AA628971, AA583342, AI819853, W72055, AI887350, AW069598, AA928346, AI669446, AW264574, AI245982, AA828393, AW305033, N57490, AI276045, AI399953, AI478692, AW130656, AW131233, AA204669, AA167004, AW131635, AW268530, AA253240, AA169501, W76249, AI201294, AA236320, AW276504, N68244, AA653293, W05834, AI082346,

459	HE9FH03	873299	<p>15 to 3058, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:458, and where b is greater than or equal to a + 14.</p>	<p>AW270411, AA491296, AI431699, AW196819, AI752836, AA171704, AA890295, AI081318, AA909042, AI061332, AI336386, AI373431, AI262352, AA683296, AI253535, AA248297, AI831015, AW243718, AI753129, AI128087, AI584003, AA559882, AA846151, AI969795, AW316619, AI369009, AI379246, AI942247, AI302629, AW156938, AI348676, AW023413, AI082427, AA171628, AI769759, AW073259, AI400534, D29081, AW130662, AA525386, AA722978, AI246205, D60770, AA961110, AI823883, AA287414, D59894, R77605, AI433493, AA720906, AA463439, AA463506, F11830, AI253623, AI971866, N77877, T65506, AW192204, R46595, AA397433, R57190, AI924613, AA989368, Z36865, D61228, AA814299, R24070, T65426, T08496, T15472, AA293843, C13978, AI265964, H43755, AW020937, D54040, AA385423, AW364171, AI749288, AA130042, AA855107, AA287499, AA327416, R21704, R24122, AI378942, N47636, AA333318, D56344, AA328903, AW380839, C15578, AA482163, AW380800, AA362809, T16609, AA463555, F09478, AA743313, AA402444, AA834097, AA361203, AA485208, AA650077, AA658584, R77606, AA720957, AW362795</p>
			<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 541 of SEQ ID NO:459, b is an integer of 15 to 555, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:459, and where b is greater than or equal to a + 14.</p>	<p>AA860263, AA480299, AW069296, AA446324, AA599825, AA490172, AW029524, AI755125, AI096788, AI754766, AW172689, AI989623, AW069409, AA774030, AI801341, AI955553, AI860571, AI077912, AW338077, AI092361, AI752441, AW303759, AW057654, AW068877, AI571507, AW337248, AI754375, AA513007, AI755165, AA789057, AW188962, AW438741, AI913204, AI669869, AI829344, AI829353, AI935898, AA872952, AI818582, AW022751, AI951160, AA564681, AI567732, AI634884, AW019909, AI583178, AI971623, AA666136,</p>

AI336224, AI754743, AI672201, AI922779, AA476933, AW242277, AW069175, AI801453, AA603177, AW069076, AI754113, N25584, AI754595, AL039514, AI569955, AW151621, AA599432, AA599421, AI801456, AI096348, AI376912, AI754485, N34795, AA679349, AI801410, AA599388, AA664468, AI473965, AA621677, AI457138, AI955867, N32845, AI814833, AA506630, AI953919, AI141442, AW190939, AI753632, AA704076, AI590418, AI435232, AI755189, AI814177, AA714292, AL049060, AA398214, AI623906, AI832542, AW192381, AI074234, AW192094, AI619763, AA847448, AI192629, N64585, AW338294, AI752700, AW190031, AI559274, AI991757, AI285575, AI803951, AI097511, AI185074, AI123099, AA604642, AI969429, AA948022, AI963435, AW073859, AI753481, AI871823, AI983991, AW339033, AW192846, AW068758, AI270294, AW339130, AA668164, AI753501, AW104448, AW069261, AI582548, N67440, AA704000, AA664477, AI862345, AA872884, AW023155, AI753881, AI921202, AI755233, N94497, AI889738, AA599518, AA668157, AI584068, W95877, AA599853, AI636393, AI677637, AA399230, AW173316, AI452935, AW020043, AW069257, AW007272, AI920883, AI634960, AW043675, AI683926, AI924122, AI042248, AI520725, AI610692, AA670236, AI440182, AA669986, AI521379, AA916597, AI360651, AA788939, N68121, AA928581, N67595, AA600706, AW020009, AI445464, AI453496, AA780838, N67969, AW242188, N68023, AW020134, AW074680, AI752771, AI989430, N22402, AI961649, AI128916, AW337180, AI263257, AI955544, AI052531, AW339166, AI755130, AI224941, N75546, AW020772, AW022916, AI266565, AW022830, AW020673, AI537166, AI983633, AI752211, N67468,

460	HWLUI05	873633	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 598 of SEQ ID NO:460, b is an integer of 15 to 612, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:460, and where b is greater than or equal to a + 14.</p>	<p>AW025810, AI916358, AA583656, AL040998, AA788947, AI753110, AI754915, AW022785, AI924574, AI620752, AA971881, AI359095, AI000924, N22105, AW068979, AI352594, AI682770, AW069522, AW068314, AA178981, N75605, AW069206, N69036, AI754101, AW069776, AI301742, AW192130, AI754272, AI961907, AW023276, N66772, N70845, AI697004, AI075736, AA953597, AI356602, AI640697, N69320, AI750841, N66723, N66359, AI582438, AI147172, R35217, N68114, K01078, Z74616, J03464, AF004877, AC002528</p> <p>AI026839, AW411245, AI891128, AI872328, AA665172, AA890493, AW129756, AW245634, AI684157, AI859338, AW189855, AI568908, AI608787, AI680416, AI758809, AI857850, AI674888, AI924833, AW305120, AI913190, AI634740, AW440303, AI628534, AI684009, AW192925, AW411545, AI986418, AI816277, AI750077, AW131652, AA587110, AW245948, AI888179, AA664798, AI830196, AI471661, AW088692, AW081939, AW027195, AI431456, AW105418, AW316666, AA573764, AA548189, AI469080, AI138390, AI554291, AW172874, AI635820, AI744780, AI956028, AA773571, AW131663, AA584414, AI823724, AW102954, AI887325, AA643103, AW272580, AI564162, AI625713, AA904107, AI735226, AI189797, AI921421, AA451930, AA548978, AI434180, AW189859, AA573828, AI567285, AW166192, AI979255, AW338989, AI749226, AA477279, AI982848, AI254356, AA594939, AA876522, AA604293, AA868757, AW026875, AI857785, AI830031, AI697117, AI610880, AI805773, AI612873, AI687193, AW169125, AW316645, AI890475, AI891076, AI955336, AW273336, AI474089, AW001306, AW057689, AW193986,</p>
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AW057817, AI912857, AI859976, AI458828,  
AI691018, AA599274, AI890065, AI796644,  
AI890735, AI686840, AA551342, AI951747,  
AW084001, AI858349, AI560824, AA838583,  
AI581152, AA188171, AI913206, AI687445,  
AW150081, AW130915, AA809140, AI982735,  
AW405990, AI697444, AA641674, AA857361,  
AW057682, AA523302, AI564744, AI188309,  
AA552651, AI002778, AI439273, AA075527,  
AW262628, AI041364, AI984754, AA593772,  
AI880734, AI801310, AA478393, AW197053,  
AA496892, AA205936, AA875856, AA829548,  
AI862708, AI610626, AW304424, AA488394,  
AA593776, AA595662, N63814, AA630736, AW242199,  
AA167275, AI683240, AW246774, AA603306,  
AA670036, AA548223, AA644580, AA614601,  
AI754745, AI332307, AA968683, AI690396,  
AI570953, AW191952, AA635552, AI001146,  
AA837949, AI357220, AA532757, AA600788,  
AA532721, AA888941, AA618618, AA877939,  
AI951447, AW104844, AI499096, AI805754,  
AI433212, AI284439, AA947024, AA583292,  
AA857081, AA737888, AA757823, AI283356,  
AI249815, AA523205, AA844175, AI697182,  
AA913217, AI246540, AA312021, AI349406,  
AW071038, AW169611, AI612766, AI811681,  
AA968644, AA523109, AI597565, AA888951,  
AI568242, AI041664, AW103978, AI027402,  
AI708239, AA633557, AA845878, AA527229,  
AI284482, AA640760, AI439316, AA745099,  
AA586990, AA730739, AI034320, AA936022,  
AA987723, AI284666, AI720193, AI521326,  
AA578404, AW392019, F31225, AA149625, AA484052,  
AA858334, AA490171, AI440194, AI963513, F26002,  
AA807874, AA847300, AA947207, AI126555,  
AA827579, AI889188, AW236351, AA846067,



461	HCEVS38	874164	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 868 of SEQ ID NO:461, b is an integer of 15 to 882, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:461, and where b is greater than or equal to a + 14.</p>	AA912479, AW191010, AA652089, M24194, Z33879, I21243, U03390, AJ132860, X75313, D29802, AF146043, M24193, AF025331, AF025330, A95274, A95300, I21248, I21247 AA255699, AI885808, AI188633, AW328314, AW361971, N40134, N42726, AA477809, AA865298, R67144, AA477088, AI192291, AA459424, AA434314, R80171, AA325547, AA405552, W04243, W57649, R07949, T63684, AI342717, H53212, AI955648, AA333808, AI828658, H23811, R22603, R81080, H38711, R78822, AW388174, AI884866, R74240, W85786, N32512, AA019982, N70297, T73669, AA135915, AI972675, AI570547, AI376181, AI283034, AW071718, AA975286, AI682097, AA552354, AI635434, T63360, AI498906, AA299231, AA700300, AW391439, N30364, AI291732, T95979, W79750, AA856989, AW409874, AA669858, AA491397, AA121478, AA019983, AA526398, AI278688, AA853328, AA262661, AW081274, AA722169, AA612637, AI089602, AW167516, R10676, AI208807, AA127610, T60656, H43071, AI016224, AW388175, AA156738, AA781277, AA985104, AW176072, AA122365, C00225, AA219271, AW072145, AI350490, AA595140, AA953943, AI275069, T95882, AA127513, H41247, H53105, R79317, N41696, AA579789, AA534037, AA375841, AA375981, AA375728, W81403, AW050895, R10677, AW083486, AA046378, AA854623, AI566541, AA568371, AA806824, AA838699, AI222557, AI890778, N47040, AA887642, AI969502, AA825983, AA683113, R07892, AW162991, AI085137, AI147153, R69860, AW300924, AI205997, R22604, AI349315, R66410, AI125503, AA654109, AI287633, AA368313, AW166548, AA476410, AA405561, AI871845, AI014775, AI446652, AI825000, AI567841, AA568550, AA612880, AA461116, AW196156, AR029284
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462	HE2BS79	874307	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 719 of SEQ ID NO:462, b is an integer of 15 to 733, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:462, and where b is greater than or equal to a + 14.</p>	<p>R77879, AA127382, AI810767, AI127392, AA127383, AI920982, AW080096, AI692923, AI243446, AI277951, R24113, AW014036, AA992633, H17260, AI431625, C14594</p>
463	HHMMBS 4	874308	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 560 of SEQ ID NO:463, b is an integer of 15 to 574, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:463, and where b is greater than or equal to a + 14.</p>	<p>AA010644, F37343, F27442, AA643008, AA011253, AC005006</p>
464	HKABZ52	874309	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 677 of SEQ ID NO:464, b is an integer of 15 to 691, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:464, and where b is greater than or equal to a + 14.</p>	<p>C04051, AA315759, T80089, T16830, R14772, AW247403</p>

465	HCROJ11	874310	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 246 of SEQ ID NO:465, b is an integer of 15 to 260, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:465, and where b is greater than or equal to a + 14.	AF088219, AL049734
466	HWLJP34	874320	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 837 of SEQ ID NO:466, b is an integer of 15 to 851, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:466, and where b is greater than or equal to a + 14.	AI831851, AW084544, AI347175, AI832159, AW083513, AW070385, AI675951, AI660499, AI269488, AI393273, AI739586, AI935546, AI431662, AI376466, AI335932, AI375749, AI080243, AI738791, AI379561, AI242668
467	HSYDL64	874325	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 489 of SEQ ID NO:467, b is an integer of 15 to 503, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:467, and where b is greater than or equal to a + 14.	T87033, T82118, T27177

468	HCEIG78	874327	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1891 of SEQ ID NO:468, b is an integer of 15 to 1905, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:468, and where b is greater than or equal to a + 14.</p>	<p>AW025289, AI935720, AA724676, AW385203, AW243018, R15390, AW014134, AA074234, R18788, H14886, AA772066, F35935, R42130, R40003, AI628487, R13943, AI540418, AI804744, AL036574, AI675744, R88613, U45975, AB032551, AC005005</p>
469	HSOBR31	874328	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 761 of SEQ ID NO:469, b is an integer of 15 to 775, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:469, and where b is greater than or equal to a + 14.</p>	<p>AI123547, AIG38611, AI332314, AI017607, AI017515, AA747554, AI123545, AA307434, W95888, N58932, AA236947, AW294479, AA188663, AW006657, AI611168, AA235883, AA907755, H49637, T86615, AW148842, W95762, H49724, T86614</p>
470	HLLCC54	874329	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1283 of SEQ ID NO:470, b is an integer of 15 to 1297, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:470, and where b is greater than or equal to a + 14.</p>	<p>AI150905, AI469110, AW136470, AA228032, N63445, AW439443, AI041883, N94705, AI352190, AA621449, AA927332, Z19412, AA947780, AA939129, AI572412, R38500, AA228031, AI768828</p>

471	HE2LO76	874330	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2141 of SEQ ID NO:471, b is an integer of 15 to 2155, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:471, and where b is greater than or equal to a + 14.</p>	<p>W56900, AA455511, AA827684, AA425850, AI292237, AI281884, AA496282, AA428403, N51765, AI472841, H61767, AI749054, AA634168, AA848045, AA772970, AA913803, W16849, R76331, H61768, R81746, R76660, AL047616, N46084, N46082, R81503, AI000803, R25755, AA366510, AA455510, R33471, R26595, R34005, AW273661, AA428757</p>
472	HTTIU53	874345	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 445 of SEQ ID NO:472, b is an integer of 15 to 459, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:472, and where b is greater than or equal to a + 14.</p>	AD000812, AC002126
473	HUFDS37	874348	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 696 of SEQ ID NO:473, b is an integer of 15 to 710, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:473, and where b is greater than or equal to a + 14.</p>	<p>AI024732, AI863537, Z43401, F06518, F08484, F05301, R25827, AL117352</p>

474	HWMAJ78	874349	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1265 of SEQ ID NO:474, b is an integer of 15 to 1279, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:474, and where b is greater than or equal to a + 14.</p>	<p>AW387843, AW387920, AI669065, AI660442, AW374954, AA179299, AA581989, AW245487, AA552295, AI290916, AA970439, AA858166, AW083567, AW081312, AA143765, AA586357, AW338329, AA826707, AI673628, AW390836, AA159525, AA552252, AW272530, AI934326, AW204476, AW273045, AI934314, AI917599, AA160684, AA897788, AW084264, AI475168, AW392046, AI744458, AA308296, AA492562, AI560238, AI687723, AI347276, AI673701, AW387832, AI912950, AA179443, AA148152, AW178987, AA133671, AW178997, AI739260, AI916157, AA524518, AA327165, AA367214, AA576490, AA359392, AC004030 AW027126</p>
475	HWADK27	874350	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 466 of SEQ ID NO:475, b is an integer of 15 to 480, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:475, and where b is greater than or equal to a + 14.</p>	
476	HCRNT71	874352	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 933 of SEQ ID NO:476, b is an integer of 15 to 947, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	<p>AA745496, AI640497, AI185795, AA679299, AI630992, AW135438, AW119128, AW268573, AI694863, AA701937, AA693960, W69674, AI076392, AI302761, AA935859, AI300728, AI174503, AA773315, W69675, AA825764, AA226398, AI913505, AA226369, AF086281</p>

477	HCRQA24	874358	<p>NO:476, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 571 of SEQ ID NO:477, b is an integer of 15 to 585, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:477, and where b is greater than or equal to a + 14.</p>	<p>AI752650, AL045836, AA853580, AI752804, AI752290, AB033025</p>
478	HUVCM45	874362	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 3456 of SEQ ID NO:478, b is an integer of 15 to 3470, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:478, and where b is greater than or equal to a + 14.</p>	<p>AI651354, AA902668, AI671714, AI660263, AI923736, AI870997, AW055188, AI597791, AI419305, AI218884, AI812004, AI184621, AI263003, AW003997, AI582873, AA398589, AI743685, AI554480, AW243444, AI650709, AI912913, AA889757, AI928338, AI016518, AI655858, AI890865, AA18563, AI479208, AW015252, AA142871, AI141504, AI439628, AW298282, AA487589, AW296920, AI348039, AI969568, AI972448, AA393378, AA488716, AI872319, AA947851, AI761843, AI018140, AI753277, AW105130, AA605233, AI656631, AI674516, AA219259, AI268912, AI218821, AA312548, AA977505, AI433319, AI750774, AA773622, N22561, N33173, AA603793, AA278683, AW020869, AI275720, AA136124, AI963022, AI219997, AA467959, AA075843, AI824937, N62723, AI240869, AA074204, AI004064, AI949016, AI609616, N27201, AA181922, AA921793, AW339771, AW079273, AA909437, AA136220, AL037622, H10307, AI750775, AA283030, AW298678, AI336597, AA219334, AI262736, AA467821, AI675214, N94333,</p>

479	HRAAG89	874368	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 623 of SEQ ID NO:479, b is an integer of 15 to 637, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:479, and where b is greater than or equal to a + 14.</p>	<p>AI962689, AA304910, AI923106, H10308, AI923101, AA610584, AW196397, N23561, W79064, AA525812, AA467960, W79278, AA384141, H13939, T39117, AI583688, AA337439, F02454, AW020276, AW272153, N41666, AA215583, H82822, AI699957, AA296400, AA774171, AA374065, R51346, F04851, H13938, AI265986, N78446, AA834424, N39945, AA808497, AA319602, AW371271, AA635866, R67972, AI913499, AI473530, AA249336, T35765, AI926163, R66887, F05731, R51453, AA214339, AA215715, AA333628, AA296441, T92452, N44957, AA186632, AA090199, AA729807, AA247419, R25968, H39536, R26772, AA352148, AA610373, T91494, N89839, F06181, AI925010, C20750, AA907845, AA903800, AW297809, AA431139, Z19610, AA214108, AI653812, AA649854, AW388311, AW388286, AW388340, N85281, AA632973, C06474, AI686813, R25574, AL040127, U29607, U13261, AB003144, L10652, AC006023, A74845, AF114784</p>
				<p>AA824313, AW298121, AI671730, AI125492, AI693007, AI684764, AI379854, AI419836, AW070876, AA665983, AA777811, AI272720, AI369047, AI347852, AI301020, AI022624, AI684754, AA582422, AI702084, AA954968, AA989429, AA775688, AA665932, AW044356, D79829, D62776, AI698551, AW181996, AA976166, AW440071, W26688, D62719, AI923301, AI538885, AI521560, AI888661, AI866573, AL042944, AI539771, AI537677, AI284509, AI500659, AI801325, AI500523, AI284517, AI500706, AI445237, AI491776, AW151138, AI282249, AI500662, AI567971, AI633493, AI434256, AI866691, AI433157, AI284513, AW151132, AI888118, AI432644, AI499915, AI889189, AW151979, AI434255, AW151136, AI494201, AI804505, AI815239, AL042865, AI866465, AI815232,</p>



	AI538850, AI887775, AI582932, AI923989, AI590043, AI872423, AI289791, AI926593, AI285417, AI582912, AW172723, AI539800, AI440263, AI889168, AI927233, AI866469, AI434242, AI805769, AI500714, AI285439, AI859991, AI436429, AI623736, AI889147, AI355779, AI581033, AI371228, AI491710, AI431307, AI440252, AI440238, AI866786, AI860003, AI610557, AI431316, AI242736, AI828574, AI539260, AI887499, AI539781, AI702065, AI539707, AI805774, AI885949, AW089557, AI285419, AI559957, AI521571, AI469775, AI866581, AW074057, AI815150, AI567953, AI446495, AI867068, AI952433, AI225248, AI698352, AI371229, AI561170, AI554821, AI440260, AW151974, AI049859, AI872300, AI621341, AI690946, AI648567, AI431238, AL042853, AA464646, AL042365, AI890391, AI358271, AI538881, AI890907, AI963846, AI433976, AI866458, AI432666, AL042595, AI610362, AI371251, AI866510, AL045500, AI866461, AI817244, AI354981, AI923046, AI804515, AW194509, AL047422, AL042787, AI446139, AL048403, AI275175, AI499463, AL047398, AI589428, AI440239, AI537273, AI436456, AI567940, AI612913, AI434240, AI285826, AI863014, AI499512, AI889133, AI371243, AW084151, AI610402, AI434223, AI610429, AL042538, AI623302, AI863357, AW058275, AI567935, AI805762, AI432656, AI366910, AL039390, AI493559, AI500061, AI274759, AW029401, AL042551, AL080046, AW162194, AL080045, AI469764, AI924051, AI554827, AL042515, AI889191, AI866608, AL042533, AI539863, AI366900, AW129310, AI355008, AA602325, AI567993, H14453,

AI343030, AA693354, AI523806, AI561177,  
AI049850, AA489001, AW197139, AI273179,  
AL047611, AI582926, AI866820, AW089844,  
AW161202, AI355126, AL045166, AI953562,  
AI620517, AI567961, AI889148, AI521596,  
AI436438, AL042377, AI828583, AW083804,  
AL036146, AI828572, AI521589, AI801589,  
AI537925, AI866503, AI537191, AW151970,  
AI371265, AL046681, AL133640, AR034821, I48978,  
A65340, AL122110, AL137529, I33392, AL133070,  
U30290, AL137480, AF032666, AL049283, I89947,  
AL133084, AL137276, X80340, AF106657, AF102578,  
AL080154, AL049314, AL133049, M92439, U77594,  
A08910, Y10823, AL133016, AL122093, S61953,  
AL110196, U87620, E12580, AL137533, S83440,  
AL133637, AF113699, AL133081, AL110221, A08913,  
S36676, Y11254, U68387, S77771, AL137665,  
AB016226, AF094480, I17544, AF058921, S78214,  
AF026816, L13297, AF087943, AL049423, AB007812,  
AL049452, A03736, AF057300, AF057299, Z82022,  
AL137712, AF177401, I48979, AL137429, AF031903,  
X79812, Y11587, AF118070, AL117583, AL117416,  
AL050146, E12747, S54890, AF002985, I89931,  
AF065135, AF090900, I09499, AF044323, I49625,  
AL050208, Y16645, AL122050, A77033, A77035,  
U57715, AL133053, AL096744, AL133113, AL137550,  
AR053103, Y10655, A08909, AF126247, AF183393,  
X84990, AL133608, AF090896, AL133619, Z97214,  
AL035458, AR038854, U58996, A08908, AL049382,  
AF210052, E12579, AL080140, U42766, AR068466,  
AL117648, A08916, M27260, AF185576, I00734,  
AR013797, AL136884, AL122049, AL137283, I03321,  
AF013249, AF111851, AL080127, AR059883, E00617,  
E00717, E00778, AL133015, S53987, AL117394,  
AL133606, AL137476, A93016, AC004213, I79595,  
L04849, A18777, AF118064, AF097996, AL137656,

480	HSLJR04	874369	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1875 of SEQ ID NO:480, b is an integer of 15 to 1889, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:480, and where b is greater than or equal to a + 14.</p>	<p>AL110222, AF061943, AR011880, AF017437, AR038969, AL133557, A07647, AL117440, U78525, E13998, AB008792, I77092, AB008791, U75932, AF090943, AF031147, I17767, Z37987, E07108, AL117457, AL050143, S68736, A08912, AB029065, A08911, AF110329, AL049324, AF215669, AL133080, AL110296, M22991, U55017, X67688, AL137574, AF158248, AL137658, I32738, U35846, AL080163, AJ005690, E07361, AL049347, A32826, A32827, A21103, A08907, AF113694, AF118094, AL050277, AF000301, AL133062, AL137488, AL096751, AL110218, S76508, I89934, AF113690, AL049300, AL050024, AR000496, D44497, D89079, U39656, AF143957, U86379, AL117460, AL050116, I66342, U57352, S69407, AF039138, AF039137, AL110225, AL117435, X59414, AL133565, AL122121, X98834, A15345, A30330, E02914, A30331, AR068753, AL137478, X70685, E02349, Z13966, AL137459, AF162270, AL133655, AL117585, I36502, AL049466, AL133568, AL137521, A51774, AF106862, AL110280, I68732, AF113019, X82434, D83989, AF114170, A76335, AF069506, AF118090, AL137271, I52013, A94751, AL122098, E01314, AL133075</p>
481	HNTBD52	874370	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1875 of SEQ ID NO:480, b is an integer of 15 to 1889, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:480, and where b is greater than or equal to a + 14.</p>	<p>D79551, D62420</p>
			Preferably excluded from the	'A1968358

482	HNTST27	874372	present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 479 of SEQ ID NO:481, b is an integer of 15 to 493, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:481, and where b is greater than or equal to a + 14.	AW239382, AA171575, AA332410, T67576, AA101350, AA101254, AA081973, AA547961, AI766488, T19153, AI190097, F01398, R44578, T23712, U69195, R37405, I70264, L07872, E03234, M81871, X17459, S63463, L07873, L34543, D14041, L34544, X59129, Z36843, M81866, L07876, L07874, L07875, X58337
483	HSKJH49	874396	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 459 of SEQ ID NO:482, b is an integer of 15 to 473, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:482, and where b is greater than or equal to a + 14.	AI084624, AI979241, AI674690, AW001796, AW439437, AA176260, AA767510, AI498630, AI650765, AA827544, AA602346, N22713, AI629034, AI912527, AA788915, N48349, AI335659, AI631259, AA157848, AA576235, AA203198, AA702708, AI921184, AA159372, AA541348, AI307704, N23024, AI290103, AI631254, H99385, AI540316, AW440370, AA037341, AA523182, AW057852, AA669808, AA601990, H99337, C00261, AA079718, AI343345, H96030, H90076, AA745282, AI636729, AA903070, N50951, H25537, H25536, H25854, H81880, W31324, W15422, R08579, AA249588, AA301968, W03046, AA304742, AI902785, AI902787, AR003317

484	HOEMK72	874399	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1486 of SEQ ID NO:484, b is an integer of 15 to 1500, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:484, and where b is greater than or equal to a + 14.	AA805893
485	HBKDS37	874400	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 477 of SEQ ID NO:485, b is an integer of 15 to 491, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:485, and where b is greater than or equal to a + 14.	F21303, AI309080, AI313045, AI583929, AC003969
486	HJMAK37	874401	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1303 of SEQ ID NO:486, b is an integer of 15 to 1317, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:486, and where b is greater than or equal to a + 14.	AA203539, AA148118, AW069718, AW179200, AW179199, AW179127, AW179066, AW179067, AW179201, AW365271, AW375212, AI970092, AW179068, W44526, AW375210, AW375209, AW177015, AI867436, AA142855, AW387298, AI972796, AW365269, AW351646, AA471044, AW365274, AA855052, AW351586, AW176988, AW351605, AI609610, AI199285, AW365305, AA622549, AW351610, AW387243, AI953879, AW387300, AW365298, W46442, C04890, AI080586, AW351615, AW351650, T47835, AW009032, AI140272, AW375293, AW351617, AW375074, AW179130, AA715120,

487	HUSGS50	874403	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 930 of SEQ ID NO:487, b is an integer of 15 to 944, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:487, and where b is greater than or equal to a + 14.</p>	AA146940, AI569811, AA708858, AI148102, AW179187, AA954511, AI280141, AI362606, AW179190, AI022446, W44525, AW365273, AW192407, C02906, AW179198, W42590, W42655, R49375, AW003019, AI460147, AA040465, AA040769, AI286271, R12655, AA225093, AA372930, AA303268, AA040464, AA033844, AI638392, AA039986, AW083637, AW365319, AI193934, AI749576, AW375224, T47857, AA923676, AW365284, AW375227, AW365278, AW387301, AA203405, AL133035, AC004987 N30151, AW194704, AI334393, AI949076, AI890882, AW027820, AI632175, AI356379, AA594117, AA203630, AI823467, AI651286, AI276677, AI370022, AI356428, AI493393, AI288570, AW172483, AA036755, AA831078, AI027633, W84550, W28230, N40442, AA906113, AW076062, AA256336, AA458607, AA524825, AA812137, R80312, D20096, AA236380, AW137712, AI956006, AI611671, AA256337, AA844452, AI040458, AA988565, AA057371, T97621, AI825118, T97573, AI886103, H87501, AA236379, AI457303, R97822, R80208, F20270, AI083695, AA091887, N35763, AI134524, AL038878, AL045327, U46344, AW374052, AL045328, AL042898, AL134110, AL047163, AL135012, AL045494, AL042420, AL042523, AL047611, AL045891, AI318479, AL042655, AL042741, AI142134, AL037295, AL038838, AL037343, AI547295, AL038983, D29033, AL037436, AL037335, AL042931, AL048657, AL037323, AL038651, AL048677, AI431323, AL042519, AL043089, AL043321, AL042802, AL042508, AL042488, AL046356, AI431307, AL042533, AI431316, AL037727, AL037443, AL038532, AL038822, AL042515, AI623302, AI431238, AL042729, AL038761, AI432644, AL042468, AL042832, AW363350, AI432666, AL038040, AL042853,
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488	HTOJL45	874407	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1663 of SEQ ID NO:488, b is an integer of 15 to 1677, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:488, and where b is greater than or equal to a + 14.</p>	<p>AI432654, AL042842, AL043166, AI432653, AL038024, AL037435, AL045326, AL042787, AI431235, AL038041, AI431246, AI431321, AI431315, AL041955, AW081103, AI432650, AI432677, AL045817, AL040207, AL043278, AL040472, AL043941, AI431328, AL043295, AL039432, AW084068, AI431230, AL038745, AL045753, AI431231, AI431257, AI432655, AI431310, AI431312, AL042135, AL047675, AI431353, AL040576, AL039360, AL037341, AR066494, A93923, A93931, AL133053, AL122101, A93916, Y17793, AL133074, D17247, A85203, AL133049, AL133082, AF019249, AL133076, AL133068, AR023813</p>
489	HLTGR10	874410	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1626 of SEQ ID NO:489, b is an integer of 15 to 1640, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	<p>W91920, H95263, AA419510, AI913372, AI435134, AW130401, AI375405, AI805967, AI140314, W91921, AI342338, AI765817, AI142820, AI222817, AI081783, AI494425, AW384945, AW384882, H09398, AI143391, AI028243, H06368, R56653, N64531, AI336765, H11180, R92953, H06369, AW131817, AA125761, AW026574, R38780, H79040, H95311, Z44340, R56652, H09337, F03221, N76105, Z42199, H78553, W05400, F06954, T80102, H11092, R92954, F01727, AA642748, F03472, R57250, AA127039,</p>

490	HWLQF84	874411	NO:489, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 623 of SEQ ID NO:490, b is an integer of 15 to 637, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:490, and where b is greater than or equal to a + 14.	AA732445, AA811541, AF052181  AW007778, AA777636, AI609948, AW076025, AW272238, W92797, AA496251, F19306, AA704226, AA564616, Z24871, AI696766, T83790, AI474594, AI540776, AL117537
491	HCQBD69	874413	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 450 of SEQ ID NO:491, b is an integer of 15 to 464, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:491, and where b is greater than or equal to a + 14.	T84308, T81666, AA344382, T81527, AA631021
492	HATBE07	874414	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 763 of SEQ ID NO:492, b is an integer of 15 to 777, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID	AI868039, N30147, AI671011, AW001046, AW292566, AA416681, AA449503, AA550918, AA508835, AI202156, H03076, F10876, R15110, F29564, H03264, R38188, H03078, R37579, F10877, AI419359, AA319552, AC004148



493	HCQDD86	874416	<p>NO:492, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 550 of SEQ ID NO:493, b is an integer of 15 to 564, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:493, and where b is greater than or equal to a + 14.</p>	<p>W02933, C16882, AA040896, AW297592, W31790, AI150968, Z25917, AA744862, D80022, C15076, C14389, AW085024, D58283, D59619, D80210, D80240, C14331, D59467, D80166, D81030, D80043, D59502, D80219, D80164, D80212, D80391, D59787, D80195, D59859, D59275, D51423, D50995, D51799, D80253, D80227, D80196, D80193, D80024, D80188, D59927, D57483, AW377671, D80269, D80366, AA305409, D80038, D50979, D59889, C14429, D59610, D80378, D80045, D51060, D80522, D80241, D80251, AI880633, T03269, AW178893, C14014, D51022, AW179328, C75259, AW378532, D81026, AW177440, AA305578, AW369651, D80134, AW178775, D80168, D80133, C14407, D80248, AW178762, D51250, AA514188, AW352158, D80949, D80132, D58253, AI910186, AA514186, AW177501, AW177511, D80247, AW360811, C14227, C05695, D81111, AI905856, AW352117, AW176467, AW378540, AW375405, D80268, Z21582, AW366296, AW360844, AW360817, AW375406, AW378534, AW179332, AW377672, AW179023, AW178905, AW352170, D80439, D59373, AW360834, D80302, AW352171, AW377676, AW178906, AW177505, AW177731, AW178907, AW179019, AW179024, D59627, D80258, AW179020, AW360841, AW178909, AW177456, AA285331, AW179329, AW352174, AW178980, AW177733, AW378528, AW178908, AW178754, AW179018, D51097, D80157, C14077, AW179004, AW179012, AW178914, AW378525, D51103, AW367967, C06015, AW177722, AW177728, AW179009, D51759, AW178774, AW178911, AW378543, AW352163, D58246, D59503, D80064, AW178983, AW352120, D80014, D58101, T11417, AW178781, D59653, T48593, H67866, C03092, AW177723, AA809122, AI557774, AW177508, F13647,</p>
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494	HUCNE27	874417	<p>D45260, AI535850, C14975, AW378533, T03116, AW367950, H67854, AW378539, AW177497, AI525923, AW178986, T02974, AW177734, C14344, AI557751, C14298, AI525917, D59317, D45273, D51221, D51231, D51213, C14973, D60010, D59474, AI535686, AI525920, AI535961, AA514184, C14046, D59551, H67858, C14957, D60214, AI525227, C16955, AI525235, T03048, D59695, Z30160, AI525242, Z33452, AI525912, AW378542, AI525925, AI525215, C05763, AC007899, AR018138, A62300, A84916, A62298, AJ132110, AF058696, A67220, D34614, D89785, X67155, D26022, Y17188, A25909, A78862, AR008278, D88547, AB028859, X82626, Y12724, AR025207, AR060385, A82595, A94995, AB012117, AB002449, AR008443, A85396, AR066482, A44171, I50126, I50132, I50128, I50133, A85477, I19525, A86792, U87250, X93549, AR066488, AR016514, AR060138, A45456, A25615, AR052274, Y09669, AR066490, A43192, A43190, AR038669, AR066487, I14842, AR054175, A30438, I18367, D88507, D50010, Y17187, A63261, AR008277, AR008281, AR008408, AR062872, A70867, AF135125, AR016691, AR016690, U46128, X68127, D13509, A64136, A68321, AR060133, I79511, AB023656, U87247, AB033111, U79457, AF123263, AR032065, X93535, AR008382</p> <p>T84735, R34768, AA229550</p>
			<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 759 of SEQ ID NO:494, b is an integer of 15 to 773, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>

495	HCRNL83	874422	NO:494, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 709 of SEQ ID NO:495, b is an integer of 15 to 723, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:495, and where b is greater than or equal to a + 14.	H06384, R18899, Z44266
496	HCRNJ94	874423	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 431 of SEQ ID NO:496, b is an integer of 15 to 445, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:496, and where b is greater than or equal to a + 14.	AC009399
497	HCROK63	874424	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 603 of SEQ ID NO:497, b is an integer of 15 to 617, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID	AI015612, AA317841, AI624575, T03365, F08847, AL135117, AI266062, AI194070, T32043, AI651726, AA769451, AA478523, R43356, AI420508, AI696266, R49018, R43553, AA706697, AA814256

498	HCQDC45	874426	<p>NO:497, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1175 of SEQ ID NO:498, b is an integer of 15 to 1189, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:498, and where b is greater than or equal to a + 14.</p>	<p>AI807206, AA456258, AI379869, AA040053, AA489238, AA491881, AI591236, AA454645, AA743491, D62113, AA348495</p>
499	HCYBG26	874427	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 382 of SEQ ID NO:499, b is an integer of 15 to 396, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:499, and where b is greater than or equal to a + 14.</p>	<p>AA305281, AW188435, AA865072, AF118637</p>
500	HCRNV56	874428	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1295 of SEQ ID NO:500, b is an integer of 15 to 1309, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	<p>AA478228, N27860, AA278201, N29624, N40633, AI061059, AI239749, AI239694, AI191282, AI287597, AA282735, AA477830, C02638, AA278669, AA282736, N41628, AI919327, AI147062</p>

501	HCYBL48	874432	<p>NO:500, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 930 of SEQ ID NO:501, b is an integer of 15 to 944, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:501, and where b is greater than or equal to a + 14.</p>	<p>AL049129, T10241, AA305569, AI124527, R26487, T54193, AI918254, AI866497, AC007707, AL049175, R33063</p>
502	HTODN93	874433	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 650 of SEQ ID NO:502, b is an integer of 15 to 664, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:502, and where b is greater than or equal to a + 14.</p>	
503	HWLQK42	874435	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 588 of SEQ ID NO:503, b is an integer of 15 to 602, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	<p>AW070344, AI805087, W92687, W92830, AI083823, AI085548, AI083824, AW150070, AW192716, AA775561, AW172659, M91217, AI393090, AW137263, W05570, F33371, R70460, AA339837, AI564511, AW380993, AA377546, AI924106, AW192211, AI825277, AA301724, AI619600, AI783751, AW190639, AW025095, AL110261, AF086482</p>

504	HODDJ01	874436	<p>NO:503, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 533 of SEQ ID NO:504, b is an integer of 15 to 547, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:504, and where b is greater than or equal to a + 14.</p>	R17798, Z46181, F07399, AI861887, AL078621
505	HNTDB90	874437	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2069 of SEQ ID NO:505, b is an integer of 15 to 2083, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:505, and where b is greater than or equal to a + 14.</p>	AL041443, AW364832, AI701163, AA703268, AI922882, AW250751, AW176631, AW384906, AA977160, AI827503, AA836106, AA031993, AW364830, AA877105, AA029769, AA857717, AI097192, AW078802, AW439369, AI679300, AA307181, AW364828, AA017441, AA814838, AI149119, AI984542, AA088220, AA693617, AA642435, AA029770, AA693727, AA219350, AA701369, H10480, AI339809, AI342040, AA278400, AA679040, AI076284, H11320, AI598085, AI679645, AA169833, AW391744, AA774000, AA705303, AW169610, AI523750, AA555045, AI560150, AA132358, AA132238, H09723, AI263297, AI242620, AI888557, AI264388, AI467876, AI937736, AW073908, AI831021, T10347, AI679877, AA903261, AW088051, AI956162, AW378474, AW105100, AA730801, AI289089, AA693705, AW449744, AA890170, Z19430, AA169653, AA768954, T10346, R73748, N50800, AW367623, T16287, AW372230, AA553714, R56996, T78632, AA471222, AW303560, H09804, AA528730, AI193292, D19681, AA504409, AI572476, AW118415, AI625091, C14104, AA031922,

				AI469393, AW383894, AA280352, AI862986, T79117, AA171744, H85873, AI473520, D57425, AW265702, AW265652, H09893, AA515950, AA278168, AW383887, AA187785, AA634073, AA171956, N55157, AW384891, AI858809, AA865810, AW383899, AW265651, R40722, H86006, AW379222, AW364831, AW246896, R20540, AI824458, AI912510, AI651840, AI863002, AI538566, AA716464, AI521005, AI479292, AI818204, AI568967, AI636507, AI696619, AI688848, AW264727, AI095003, AI927233, AW079148, AI696714, AI620056, AI624624, AA491505, AA830022, AA582029, AL049053, AW004606, AA832315, AI446511, AI364167, AI538564, AI915291, AI500714, AW152182, AI698391, AI582932, AI590043, AI889189, AW075382, AI678623, AI866469, AI474699, AI784214, H89138, AI621341, AI884318, AA731640, AI638644, AI570056, AI868680, AI370623, AW104141, W74529, AI539260, AI634737, AW082530, AI803786, AI701097, AI499570, AF090384, U35832, AF079566, AF110957, U35833, AB015337, AR038854, AR050959, AF080068, A58545, AL137716, AL137550, D44497, AL137463, X59813, X78627, AL133049, AJ005870, AL049452, I89947, A41579, U72621, U95114, AR034821, L35261, AF199509, AF126372, AL137530, Z82022, X68249, AF047716, AF124396, AF008439, A15345, A08456, A31057, U70981, AF038847, A77033, A77035, AL117587, U97675, AL133062, AF044323, I32738, A52184, X68560, AF137367, Z97214, AF103804, AL137711, AL110269, A23327, AL049276, L10730, AF087943, AF126488, AF125948, X69026, M79462, AF115410, X83544, E12806, E00984, I04527, AF082324, U57352, Y14634, U35846, AF116573, AF032666, AJ004832, AC007043, S65585, AR016802
506	HFPBQ02	874438	Preferably excluded from the	AI310512, AI017928, AI126428, AW183671,

507	HTXSK90	874447	present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1220 of SEQ ID NO:506, b is an integer of 15 to 1234, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:506, and where b is greater than or equal to a + 14.	AI769482, AI278244, H98700, AI276464, AI804304, AA150603, AA932025, AA150714, AA634250, AI693144, H15730, AL079931, AA018551, T71559, AI202638, AI669430, Z30167, AA583318, C15865, F11286, AW206756, AI824461, AI927394, AI676140, R22715, AI093716, R20421, AI080371
			Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 632 of SEQ ID NO:507, b is an integer of 15 to 646, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:507, and where b is greater than or equal to a + 14.	AI032786, AI127382, AW296271, AI660953, AI582209, AA460965, AI376115, AI023644, AA461274, AI016900, AA767046, H00465, AA815039, R05714, H11254, AI868663, AA300091, R05715, AW403510, AA815462, AA235654, AW292253, W24933, AA628366, N93714, T49554, H00515, T49555
508	HTECD58	874449	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2243 of SEQ ID NO:508, b is an integer of 15 to 2257, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:508, and where b is greater than or equal to a + 14.	AI217906, AW195775, AW195785, AA453351, AW386766, AA305356, AW082713, AW082701, AI795920, AI888047, AI439162, AI560009, AA995922, AI027616, AA453250, AA931063, AA463611, AW271381, N70413, AW085226, N23186, AA307663, AW008346, D78724, N94104, N39404, R72697, AA463258, AA262496, D61644, AI955116, N69284, H96507, AA009470, AA384388, R72625, D81170, AA911484, D80814, N48519, N32651, N41472, AA262490, AA705711, AA299338
509	HWLQH59	874452	Preferably excluded from the	AI128388, AI086103, AI796014, H04253, AI687030,



		<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 687 of SEQ ID NO:509, b is an integer of 15 to 701, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:509, and where b is greater than or equal to a + 14.</p>	<p>F24953, AL134524, AL045328, AL038838, AL037436, AL038983, AL037323, AI142134, AL042898, AL037727, AL039643, AL038745, AL037343, AL047163, AL037335, AL079852, AL037295, AL134110, AL037443, AL038532, AL037341, AL045989, AL047037, AL044125, AL038822, AL037435, AL040193, AL043941, AL044162, AL041347, AL047012, AL040621, AL043538, AL043496, AL043923, AL043814, AL041238, AL044186, AL040617, AL041324, AL040463, AL043845, AL047170, AL038761, AL044037, AL045327, AL041635, AL040294, AL044064, AL040464, AL041459, AL041577, AL047219, AL041098, AL040625, AL040576, AL045684, AL041752, AL045753, AL046850, AL040768, AL046994, AL046914, AL040052, AL040510, AL043467, AL040444, AL043677, AL040839, AL047183, AL043492, AL041602, AL044074, AL041246, AL041730, AL041523, AL043627, AL041374, AL043848, AL043570, AL040472, AL042135, AL046442, AL045857, AL041133, AL045671, AL041955, AL037279, AL040322, AL039316, AL041296, AL041096, AL046392, AL041163, AL040119, AL039360, AL044272, AL041086, AL044258, AL042096, AL041168, AL041159, AL047057, AL045920, AL040148, AL049018, AL041358, AL040458, AL044187, AL041233, AL040075, AI547295, AL041292, AL041346, AL045990, AL045817, AL040571, AL041142, AL040332, AL039338, AL040529, AL079878, AL041197, AL046330, AL040745, AL040370, AL040149, AL041344, AL044274, AL040128, AL044199, AL047036, AL040342, AL040553, AL041186, AL039432, AL040414, AL041277, AL039744, AL040285, AL040155, AL040091, AL044165, AL041131, AL040090,</p>
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	AL041051, AL040168, AL044201, AL043775, AL046327, AA585439, AL040253, AL041227, AL040082, AI546921, AL043444, AL040329, AI541356, AL041278, AL038651, D29033, AL040263, AI526186, AI557864, AL040255, AI526176, AI547006, AL040238, AL038878, AL045211, AL045725, AL041140, AI535813, AL079977, AL039915, AL043612, C16305, AL048677, AI541506, T41289, T18597, AI547039, AL044529, AI526194, U46344, AI525500, AI526073, AI540920, AI525556, AI318479, AI540974, AI557084, AI547291, AI541205, AL040385, AL049069, AI526187, AA585453, AL135012, AL042523, AI547250, D59436, AI557262, AI546971, AI557731, AA174170, AA585476, AI526184, C15737, AL045494, AA585098, AI546855, R28967, R29218, R28895, AA283326, T10982, AA585325, AI557808, D60844, R28965, R28892, AI541346, AL042420, R29262, C06219, T11028, AI557238, AI546891, R45895, AR064707, AJ238010, AR066494, I08396, I08389, A93923, D17247, A93916, Y16359, A93931, A58524, A58523, D13509, A93016, AR035975, AR035977, AF082186, AL122101, A85203, AL133053, Z32836, E13740, X81969, I05558, A60212, A60209, A60210, A60211, A86792, D50010, AJ244003, AJ244004, AJ244005, A98767, A20702, A93963, A93964, AR062872, I63120, AR062871, AR017907, A43189, AR062873, A43188, A20700, A25909, A98420, A98423, A98432, A98436, A98417, A98427, D78345, E03627, I48927, A35537, A35536, A02136, A04664, A02135, A04663, I84553, I84554, E17098, I06859, A18050, A23334, A75888, I70384, A60111, A23633, AR007512, I62368, I05845, A81878, A22739, AL133074, AB025273, AR038855, A22738, A90655, D13316, A02712, A77094, A77095, A95051, A18053, A64973, I03331, AR031566, I00682, A11245, A11624,

				<p> A11623, E00609, A11178, E01007, I13349, A10361, AL133082, AL133049, A16035, AR043601, A85395, A70872, A85476, I44681, X83865, I19525, A84772, A84776, A84773, A84775, A84774, AR067731, AR037157, AR054109, AR067732, A58522, A91750, AR063812, AJ230845, M28262, AF149828, Y14219, I15718, S60422, I01995, E12615, A02710, AR035193, A92133, E14304, A07700, A13393, A13392, AR031488, I13521, I52048, A27396, I25027, AR027100, I49890, I44531, I28266, I21869, I26929, I44515, I26928, I26930, I26927, A91965, I44516, A70040, E16678, A82653, I08051, E16636, I15717, A22734, A24783, A24782, A95117, AJ230935, AJ231028, AJ230972, A06631, I33632, AR035974, AR035976, AR035978, AJ244007, I08395, E03654, I66495, I66494, I60241, I60242, I66498, I66497, I66496, I66486, I66487, AJ230902, AJ231009, AR023813, AR054723, I03669, I03668, AJ230867, AR051957, AJ230951, A20699, E00696, E00697, E03813, I66482, AR009151, I66485, I66483, I66484, AR038066, AR027099, A05993, A05991, AR051651, AR051652, AL133076, AL133068, AJ230996 </p>
510	HHEPP22	874455	<p> Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 331 of SEQ ID NO:510, b is an integer of 15 to 345, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:510, and where b is greater than or equal to a + 14. </p>	<p> AA534892, AI803520, AA112679, AI383031, AA766268, AA779737, AW380003, AL038605, AA420722, AI284517, AI538342, AW129271, AI866573, AL037582, AL037602, AI371251, AL047344, AI923398, AL043632, AI784230, AI922561, AI567582, AW079334, AW079572, AI702013, AI421149, AI866458, AW029263, AI539028, AI564259, AI587121, AI699255, AI913452, AI815855, AI690426, AI669864, AI918449, AI360195, AI633061, AI683492, AW029457, AI765469, AI480118, AI912434, AI609593, AI349964, AI567814, AW195968, AW189189, AA658033, AI658566, AI674838, </p>

AI686081, AI452857, AI538850, AI887151,  
AI499570, AW192976, AI554818, AI912533,  
AW007833, AI671931, AI560010, AI857724,  
AI620056, AI862024, AI912435, AI610822,  
AI799472, AW189802, AI653979, AI345666,  
AW079859, AI624950, AA827691, AL047854,  
AI887163, AI560184, AI648699, AW163834,  
AI418970, AW023338, AW078729, AW020381,  
AA857847, AI691088, AI568114, AA731711,  
AI349958, AW079818, AI539723, AA572758,  
AI288285, AI624938, AI866691, AI702527,  
AI567501, AA862485, AI267162, AL041150,  
AI697359, AW089844, AA805708, AI560844,  
AI355779, AI638644, AW263804, N25033, AI630252,  
AI285439, AI289791, AI356929, AL120300,  
AA746507, AI493858, AI433611, AW172607,  
AW303074, AW008353, AW304652, AI610399,  
AI471429, H89138, AI954200, R06685, AI868204,  
AI686589, AI950100, AI582871, AA528822,  
AI805688, R39624, AI469516, AI565172, AW084097,  
AI421662, AA808175, AI698391, AI628711,  
AI802998, AI683897, AI815233, AI630947,  
AW129264, AW081383, AI824375, AI597805,  
AI524179, AI521560, AI457113, AI309306,  
AA835970, AI559863, AI687568, AW189965,  
AI918634, AI884318, AI368043, AW025279,  
AI096771, AI571439, AA975952, AL043196,  
AI886181, AI419826, AI758445, AI539071,  
AI635634, AL037081, AW008226, AI811631,  
AI925028, AI610671, AI564290, AI863002,  
AW192363, AL120700, AI863047, AI371984,  
AI969655, AI933727, AI539260, AW148882,  
AI453328, AW262983, AI824503, AI440239,  
AW104141, AI244380, AI167231, AL121270,  
AI095003, AI500714, AW074374, AI586931,  
AI491710, AW007580, AI874004, AA693354,

511	HLLLLD01	874458	<p>AL041562, AI628284, AI537643, AI273886, AW084368, AI923359, AI564620, AW149925, AA761573, AI627714, AI679487, AW051088, AW161202, AW118448, AI569440, AI954721, AI679261, AW268067, AI367328, AW081917, AI249389, AI628325, AW172981, AW074236, AI358200, AI886016, AI342023, AI355613, AW084801, AI623682, AI446511, AW002698, AL036255, AI915291, AI683292, AI500061, AI696714, AI370623, AI591228, AF162270, AL035587, AC002287, AP000250, Z82206, AF032666, AL117440, AC005156, AC005048, AL032822, AL022147, AL022165, AP000020, AP000211, AP000133, AP000030, AC006203, AC005940, E06743, AC006115, AL133623, AF042090, U36585, A65341, Z49258, AL137627, U95739, AL034417, Z82022, AC004989, AF153205, AP000130, AP000208, Z83840, AC006222, AP000247, AC006112, AP000697, AL096776, AC004797, AF067728, AC002464, AC004837, AF061573, AC009501, AC006336, AC004057, AL117587, AF013797, AC009233, A77033, A77035, AC006299, AL031295, AF038847, AF090901, AC006039, AL050393, AC005886, AC007392, AC004383, AC002301, AF097996, AC002472, AC007114, AL133445, AL035407, AL021393, AC004878, AL049557, AL050172, Z97214, AC005091, AC004690, AL035458, AC006501, AC002558, AC000052, AL136130, Y10936, AF145233, AL049430, AC009286, AL133084, AC004987, AF095901, AL133014, AC008014, AL137471, AC007869, AC004808, AC018767, E12579, AC006288, AC007056, AC007390, AL035464, AL035067, AC005291, AL080146, AW157329, AI692198, AA584408, AI929359, AW157252, AW003514, AI765658, AI924025, AI810740, AW163385, AW163525, AW157459, AI989669, AI659582, AI969924, AI340993,</p>
			<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by</p>

512	HWLRA47	874459	<p>the general formula of a-b, where a is any integer between 1 to 953 of SEQ ID NO:511, b is an integer of 15 to 967, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:511, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 518 of SEQ ID NO:512, b is an integer of 15 to 532, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:512, and where b is greater than or equal to a + 14.</p>	<p>AW163255, AI349083, AI929284, AI340991, AW299522, AW299513, AI912836, AI341293, AI650609, AA279840, AA132529, AW074796, AI307481, AW301440, AI420833, AA132590, AA279903, F36954, F29823, AW370022, AA618529, F36948, AW299502, F36952, AI962519, F26420, AI915440, T24436</p> <p>T85523, AA312283, F06560, Z99396, AW392670, AW384394, AW372827, AW363220, AL119443, AL119497, AL119319, AL119457, AL119324, U46341, AL119496, AL119355, AL119396, U46349, AL119341, AL119483, AL119484, AL119363, AL119391, AL119335, U46350, AL119522, AL036418, AL038837, U46351, AL119399, AL037051, AL036725, AA631969, AL119418, U46347, AL119444, U46346, AL036858, AL134527, AL042614, AL037205, AL119439, AL042551, AL042975, AL134518, AL042433, AL042965, AL134902, AL039074, U46345, AL134920, AL134528, AL042984, AL036924, AL119488, AL039912, AL134538, AL042970, AL042450, AL042542, AL038509, AL042544, AL043019, AL043029, AL036190, AL037085, AL036767, AL037094, AL043003, AL037077, AL036774, AL037526, AL036196, AL037639, AL037082, AL119464, AL038520, AL036268, AL037027, AL036998, AL038851, AL036733, AL036765, AL037615, AL036191, AL036679, AL036886, A81671, AR060234, AR066494, AR023813, AR064707, AR069079, AR054110, AB026436</p> <p>N72353, T97421, AL133353</p>
513	HCRMX57	874460	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 501 of</p>	

514	HFPEC02	874461	SEQ ID NO:513, b is an integer of 15 to 515, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:513, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 481 of SEQ ID NO:514, b is an integer of 15 to 495, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:514, and where b is greater than or equal to a + 14.	AA665310, AI367951, AA313588, AI565593
515	HMEE102	874467	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 432 of SEQ ID NO:515, b is an integer of 15 to 446, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:515, and where b is greater than or equal to a + 14.	R88606, AA425967, AA485522, AI989388, H14288, AL043020, Z92544
516	HKCSZ54	874468	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1161 of	T05569, AC005815

517	H2CBM49	874469	<p>SEQ ID NO:516, b is an integer of 15 to 1175, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:516, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 459 of SEQ ID NO:517, b is an integer of 15 to 473, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:517, and where b is greater than or equal to a + 14.</p>	AA307756, W03805, AA309459, AA492105, AA501614, AA251356, F29520, AA872564, AA845804, F16979, AA527209, AA626823, R46803, AC004883, AC004967, AC002558, AL096791, AC002351, AP000512, AC002288, AC003662, AC009247, AL050318, AC002300, AC006544, AC005015, AC004491, AL031680, AC002073, AC005800, AF069291, AC006270, AF111167, AC004605, AC005291, AC005500, AC007371, Z97054, AC006241, AL135744, AC005049, AL035685, AC007688, AJ003147, AC006064, AC005225, AC007216, AL024498, AP000355, AC005971, AC004000, AL035460, AL096701, AL121658, AL049709, AC005081, AC004797, Z83822, AF111168, AF165926, AP000144, AC005914, AC005088, Z97053, AC004526, Z98036, AL122020, U91326, AC005803, AC004813, AC006211, AC007390, AL121603, AC009516, AL080243, AF001550, U47924, AC012085, AC005037, AC004985, AL049776, AL031848, AC006120, AL031685, Z95115, AC006449, AC006530, AL031591, AJ229043, AP000117, AC005209, AC004125, L4140, AC007298, AC005695, AC007676, AC005089, AC005527, AL049869, AC007637, AF053356, AP000555, AC006039, AC004686, AC006057, AC002044, AC002563, AL008627, AF205588, AC005071, AC000025, AF003626, AC007546, AF134726, AC005746, Z99943, AC005529, U80017, AC016025, AJ246003, AL008726, AC004253, Z84480, AC005193, AC006277, AL034420, AL133246, AC004383, AL049712, AC003009, AC005399, AC005488,
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518	HUVGR86	874470	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1494 of SEQ ID NO:518, b is an integer of 15 to 1508, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:518, and where b is greater than or equal to a + 14.</p>	AL022725, AC005874, AF134471, AC004815, AB000882, AC004998, AC007240, AC006077, AC007151, AL132777, U91323, AF126403, AC002477, AC005924, D87675, AL035587, AC006441, AC005972, AC007731, AC005703, AC006946, AL021391, AL049765, AC004895, AL031774, AC005519, AC005696, AL139054, AL049780, AC002365, AC007055, Z99716, AP000346, AL035086, AC002565, AC007542, AF030453, AC005921, AL031985, AC002470, AC003982, AC007999, AC005331, AC006006, AC005725, Z98051, AL035555, AC002404, AF109907, AC006071, AL034549, AF001548, U95740, AL096712, AC005410, AF002223, AL023553, AC004685, AL035420, AL109758, AF067844, AL121754, AL022316 AL039245, AI955098, AI857804, AI355557, AI469403, AW249170, AW167089, AW264538, AI922792, AI090862, AA614415, AW015755, AI970459, AI589853, AW302158, AI591130, AI990223, AI860824, AW248743, AA954810, AI652051, AI634311, AI739259, AI886436, AW196771, AW078970, AA908313, AI798561, AI611669, AA506437, AW079611, AI912359, AA131747, F37324, AW183471, WI9261, AA679753, AW264730, F27752, AW339361, AA514635, AA962100, AA330885, H91413, AI869375, AI829609, AW297389, AA465711, AW050424, AA131835, AA355811, AI587515, AI493248, AA583508, AI933589, AW263823, AI289791, AW169604, AA969375, AI865289, AW059765, AI866770, AI801152, AI802542, AI586931, AI955906, AI565172, AI954721, AW151136, AI345688, AI114703, R81679, AI640704, AI538885, AW118518, AI799183, AW025279, AI915207, AI473536, AW176261, AW029457, AL037582, AL037602, AI251221, AW089275, AW022582, AI491710, AL046944,
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AL138406, AI653829, AW410842, AI473451, AI432085, W60528, AA808175, AW161402, AI355613, AI587209, AI648509, AI628711, AA659314, AW081036, AI499890, AL039430, AI859644, AI446511, AL036988, AI095003, AI638644, AL043152, AI493576, AW148363, AA504514, AW193236, AI538764, AI633125, AI361319, AW129106, AI613038, AI283760, AW055252, AI524179, AW131282, AL036673, AW022102, AI915291, AI954475, AI680221, AI431975, AW088698, AI440238, AA830821, AI309306, AW410259, AI698391, AW169527, AI554821, AI923370, AI889189, AI921633, AA641818, AW243886, AI927233, AI699865, AI559863, AW089006, H89138, AI554343, AI445620, AL046466, AI623941, AI500061, AI690410, AW008353, AI524654, R28164, AI539260, AI274745, AI784214, AI620056, AL040011, AW083750, AI648699, AI281757, AI275163, AI270295, AI819545, AI270706, AI432644, AI802244, AI471282, AI690813, AW194014, AW088560, AI371984, AW051088, AI890907, AI627360, AI621341, AW104141, AW192687, AW079432, AI619817, AI401697, AI538564, AI553645, AW403717, AI624548, AA464646, AI916419, AW152182, AW262026, AL038605, AI474646, AL118781, AI285439, N22276, AA761608, AI582932, AI923989, AI590043, AI872423, AW148356, AI537677, AI699020, AI866162, AI434731, AI521560, AI500662, AI648494, AI333104, AI471429, AI452560, AI866780, T69241, AL046931, AI479292, AI866469, AI860027, AW167086, AI590020, AL040205, AA502794, AI500714, AW188693, AI279925, AI635032, AI368816, AI884318, AI859991, AI800370, AW080920, AI889256, AW238688, AI581033, AW103628, AI439452,				
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AI570056, AL043355, AI269205, AI954422, AI932794, AI569975, AI860003, AI554344, AW079409, W74529, AI917428, D63481, AF090900, AJ005690, I48978, AL110221, X59414, U00763, AL117416, A03736, X66862, AL050024, I29004, X66417, I89947, AL122104, AL137459, AL137530, AF124728, AL133665, AF013214, AL137533, AF118090, AL110280, I03321, E04233, I09499, AL050092, AF182215, AL117587, X98834, AR038854, A08913, AL110158, AL122121, I48979, AL133640, AF017790, A08912, A08911, AF067728, E12806, AL117435, S76508, S78214, X82434, AL137523, AL137271, E12747, AF017152, AL133560, AL137539, A08907, Z13966, AL133075, AF002672, A08910, AL137627, A08909, AF017437, AF175903, A77033, A77035, AF132676, E02349, AF061836, AL050172, AF176651, U87620, AL096744, AF039138, AF039137, AF044323, AL133568, AF114168, Z97214, AL110218, AF179633, AC004686, Y10655, AL137521, A08908, AL080159, L31396, L31397, AL122050, I79595, AF002985, L04504, AF102578, AF113677, Z82022, M85164, AJ242859, AF094480, AL050155, AF139986, AL133619, AB019565, I32738, A18777, I89931, AF113690, AF111851, E01314, AL117457, S77771, AL096720, AL117394, AL137488, I49625, AR020905, AF038847, AL137478, A76335, AF069506, AL110296, AL117460, Y09972, AL137558, U72621, AR034821, U42766, AL133565, AL137548, D16301, X83508, AF145233, A86558, AF118064, A65340, AL133080, AR029490, AF047716, AF043493, AF090903, U37359, I66342, U78525, AL050393, D83032, I89934, D83989, U01145, A92311, AL122049, AF108357, AF015958, AL110228, AF090901, A21101, AC003032, AC004822, AL137537, AL050170, AL122110, AR013797, AF090934, AF097996, U67958, AF087943, AL049382, X52128, AR060156, AL133016, AL080118,				
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519	HCVBN52	874472	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 578 of SEQ ID NO:519, b is an integer of 15 to 592, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:519, and where b is greater than or equal to a + 14.</p>	<p>U75932, AF067790, AF028823, AF113689, S63521, Y16645, AF118094, S36676, Y11587, AF065135, AF113699, Z72491, U02885, AF106827, AL117583, AF183393, AF159615, AF159148, A93350, Z37987, AL137529, AL096751, E01614, E13364, AL137480, AF032666, AJ012755, M92439, AC007298, X61970, AR068753, L04849, S83456, S68736, A08915, AL023657, AL110224, AF061573, U77594, AR022283, AF113694, AF100781, AL049283, A76337, Y13350, AL137258, I46765, AF200464, AF169154, AL050116, E06743, AL049452, Y07905, AF079765, A08916, AL137292, AL117432, AL137479, L13297, X66871, AF031147, AF153205, M27260, AJ003118, AL136842, X65873, AL133112, AL049347, AC002467, I22272, AL080060, AL049938, AL133093, AF118070, U92068, AF141289, AL080110, AL080234, AL137711, U62966, AF185576, AL050138, X93495</p> <p>AA305496, AA436754, H80977, C14389, D81026, D59927, D80212, D80522, D81030, D80391, D59787, D58283, D80248, D80045, D59859, D59502, D80196, D80022, C14331, D80166, D80195, D80043, D59467, D51423, D59619, D80210, D51799, D80164, D59275, D80240, D80253, D80227, AA305409, D80188, D80133, D50995, D51022, C15076, D80219, AA305578, AW377671, D50979, D57483, D80269, D59610, D80038, D80366, D59889, D80193, D80024, D80378, D80268, AA514188, AW177440, D80251, D80241, AW179328, C14429, AW178893, AA514186, D51060, T03269, AW360811, C75259, C14014, D80134, D80132, AW378532, T11417, AW375405, AW177501, AW177511, D59373, C05695, AW178762, F13647, AW366296, AW360844, AW360817, D51250, AW375406, AW378534, AW179332, AW377672, AW179023, AW178905, D58253, AW178775, D80302, AW178906, D80157, D80439, AW369651, D80247, AW352158, AW352117, AW176467, AW352171,</p>
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	AW377676, AW352170, AW177731, AW178907, AW179019, AW179024, AI910186, AW177505, AW360841, AW179020, AW178909, AW177456, AW179329, D59627, AW378528, AW178980, AW177733, AW178908, AW178754, AW179018, D51213, D51759, D51103, AW352174, AW179004, AW179012, AW378525, AI905856, AW178914, D80258, AW367967, D58101, D80014, C06015, AW177722, D59503, AW177728, AW179009, AW378543, AW360834, AW178983, AW178774, AW178911, AW352163, AW378540, T48593, D58246, Z21582, AW178781, AI535850, AW352120, D59653, D45260, D59474, C14227, AW177723, D80064, AA285331, D81111, AW367950, D51097, C03092, AW177508, T02974, H67854, C14975, AW378533, H67866, AA809122, AW178986, AW177497, AI525923, AA514184, C14973, AW177734, D80228, T03116, AI525917, D59317, D45273, C14344, C14407, D51221, D60010, AI525920, C14046, AW378539, AI535686, AI557774, C14957, D59551, AI557751, AI525227, D60214, AI525235, C14298, T03048, D80168, AI525912, AI525242, AW378542, AI525925, AI525215, AI535961, C16955, C05763, Z33452, AI525222, AW360855, AI525237, H67858, C04682, T02868, D31458, D59695, AF058696, AJ132110, A84916, A62300, A62298, AR018138, AR008278, AB028859, D26022, X67155, Y17188, A25909, Y12724, A67220, D89785, A78862, D34614, D88547, A82595, A94995, X82626, AR060385, AB002449, AR016808, AR008443, AR025207, I50126, I50132, I50128, I50133, AR066488, AR016514, AR060138, A45456, A26615, AR052274, Y09669, A43192, A43190, AR038669, AR066487, AR066490, AB012117, A30438, I14842, AR054175, I18367, D50010, X68127, Y17187, A63261, A85396, D88507, AR066482, A44171, X64588, AR008277, AR008281, A85477, AR008408, I19525, A86792, AR062872,

520	HDPFO58	874473	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 554 of SEQ ID NO:520, b is an integer of 15 to 568, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:520, and where b is greater than or equal to a + 14.</p>	<p>A70867, AR016691, AR016690, U46128, X93549, D13509, A64136, A68321, AR060133, I79511, X72378, U79457, AF123263, AR032065, AR008382 AA313465, AC002476</p>
521	H2CBC28	874474	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 973 of SEQ ID NO:521, b is an integer of 15 to 987, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:521, and where b is greater than or equal to a + 14.</p>	<p>R17875, AA307182, AA234820, R51143, AA332209, H20879, T74325, AW296624, F12429, AW452273, R14421, Z44528, H06787, D59627, D51213, D80168, D80258, C14298, D80949, D59503, D45273, C14407, D59695, D80014, D52291, D58101, D51079, C14227, D80064, D80212, T03048, AW360780, C14389, D81030, T11417, D59927, D80290, C16955, D58246, C14331, D80045, D81111, D52059, D80228, D59484, D80391, D59787, D81026, AW377669, D59619, D80210, D80240, D80522, D80157, D80022, D80166, D80248, Z33452, AI535686, D59502, D58283, AW377661, D80195, D51423, AI557751, D51060, D59859, D80366, D80164, D59467, D51799, D59275, D80253, D80268, D80043, D80227, D80193, D59610, D80388, D80024, D80439, T02974, D80188, AA305409, D50979, C06015, AA305578, D80038, C14014, AI557774, D80241, D80378, D59373, AA514188, D51759, D80302, AI525228, AA514186, H67854, H67866, D80247, D80196, F13647, AI525216, D80219, C13958, C15076, C03092, AI535663, D80133, D80251, Z30160, D50995,</p>

522	HCRQF18	874475	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1141 of SEQ ID NO:522, b is an integer of 15 to 1155, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:522, and where b is greater than or equal to a + 14.</p>	<p>C14973, D51022, AA514184, C14344, AA809122, D59551, C14077, D57483, D80269, D59889, D59474, C04682, Z21582, D59317, D51221, T03116, F13796, AI525978, C06084, H67858, AI525969, AI525238, D51103, T02868, D45260, AA305720, AI525215, AI525923, AI525242, AI525235, AI525920, AI525912, AI525227, AI535961, C05763, D31458, AI525917, AI525237, AI525922, AI525925, AI525914, AI525907, AI525903, Z92542, AR016808, AB010386, X64588, I82448, U37689, A47134, I81198, A84916, AB019242, A62300, A62298, AB028859, I82446, AJ132110, AR018138, X72378, AR008278, AF058696, I14842, AB002449, A82595, AR060385, I79511, AR054175, AR008277, AR008281, AI091231, AI655460, AW419347, AA599117, AA324808, Z39364, R51273, AW392670, Z99396, U46347, AW384394, AW363220, AL119484, AL036418, AL038837, AL037051, AL036725, AA631969, AW188647, AW372827, AL043003, AL119457, AL134153, AL119497, AL119319, AL119324, AL119439, AL119391, AL119443, U46350, AL036858, AL119522, AL039074, U46351, AL036924, AL119483, AI468939, AL119363, AL119355, AW128838, U46341, U46349, AL119341, AI497736, AL119396, AL119335, AL119418, AL119496, AL135561, AL038509, AL037085, AL039564, AL119444, AL039085, AL037205, AI568881, AL039156, AI270298, AW081940, AL039108, AL134132, AL039109, AL039128, AL037094, AL134530, AL134519, AW272567, AL037526, AL134531, AL036196, AL119401, AL036190, AL134527, AL134528, AL043147, U46346, AL079657, AL037639, AL042614, AL039659, AL036767, AL038520, AL134533, AL037082, AL119399, AL042984, AL042965, AL042975, AL036268, AL042542, AI792230, AL134538, U46345, AL042544, AL042989, AL043019,</p>
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523	HE2CI70	874479		<p>AL042551, AL037077, AL043029, AL042450, AI142134, AL039625, AL039648, AL045337, AL036238, AL042909, AL038447, AL039678, AL039629, AL039386, AL036998, AL037615, AL038851, AL036733, AL037027, AL119464, AL036774, AL037178, AL037021, AL036765, AL039410, AL036719, AL036191, AL036679, AR066494, AR060234, A81671, AR023813, AR064707, AR069079, AB026436, AR054110</p> <p>AI927646, AW001077, AI951703, W70091, AI951705, AA134111, AW235988, AI144285, N51368, D63211, AI700903</p>
524	HSPAX64	874480		<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 515 of SEQ ID NO:523, b is an integer of 15 to 529, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:523, and where b is greater than or equal to a + 14.</p> <p>H97940, AI472133, AI004952, N27386, AW235689, AI633433, AI119741, AA988792, N30111, AA830923, AW316939, AI961563, AI149583, AA507636, AI823859, AA507630, N32009, AA628731, AI358786, AA856747, R78501, AA323243, R65698, R78550, AI192314, R22064, AI122755, AA578856, AI379549, AI084575, R77137, R80450, R22905, R24489, R31530, R36133, R23007, R68060</p>
525	HCRPE10	874481		<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1967 of SEQ ID NO:524, b is an integer of 15 to 1981, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:524, and where b is greater than or equal to a + 14.</p> <p>AA329666, AI281401, AI439393, AI798407, AA302817, AW157731, AW276678, AA417723, T08386, H68343, AA569715, AB003151, AP000688, AC005697,</p>



526	HTOJA79	874482	<p>nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1556 of SEQ ID NO:525, b is an integer of 15 to 1570, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:525, and where b is greater than or equal to a + 14.</p>	<p>AF051976, AC005837, AL109627, AC004144, Z83850, AC004491, AC008109, Z84466, AC002364, AC005280, AL049764, AF196972, AL049697, AC005089, AF111167, AC005874, AF134471, AC006597, AC006312, AF087017, AC006473, AL031280, AC005736, AC004987, AL022311, AC004448, AC003666, Z98200, AC008372, AC005796, AL022315, Z98257, AL022323, AF196970, AC002549, AC005740, AC000379, AC002312, AP001053, AF111168, AF196969, AC005353, AL049776, AC000134, AL024507, AC005562, AB022785, Z94161, AP000065, AC006511, AL031984, AP000112, AP000044, AC004472, AP000466, AC005049, L34160, U20499, AL021155, AL035400</p>
527	HGBG131	874484	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1070 of SEQ ID NO:526, b is an integer of 15 to 1084, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:526, and where b is greater than or equal to a + 14.</p>	<p>AW269339, AI631650, AI743766, AW071647, AI141513, AI141515, AW183591, AA759305, N66691, N56903, AI206817, AI703230, AW263621, N32112, AI377705, N24656, N24651, N32124, N35855, AA608925, AI267504, N56791, AW026617, AA813748, H14805, AW183221, AA249548, N35444, N98958, N46634, AI886816, Z83822, D86969, AF127774</p>
527	HGBG131	874484	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1492 of SEQ ID NO:527, b is an integer of 15 to 1506, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	<p>AI924940, AI650533, AI057572, AI424452, AI087991, AI674568, AA282264, AI638589, AW044688, N25211, AI291941, AA687274, AW183909, AA447768, AA453699, AA513691, AI193754, AI362359, H25491, C01395, H88787, AI051462, R40823, H89006, AL118765, R58364, AA620624, AA346606, AL039912, AI142134, AR043113</p>

528	HCRMF12	874485	<p>NO:527, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 307 of SEQ ID NO:528, b is an integer of 15 to 321, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:528, and where b is greater than or equal to a + 14.</p>	
529	HCQDD11	874486	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 800 of SEQ ID NO:529, b is an integer of 15 to 814, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:529, and where b is greater than or equal to a + 14.</p>	<p>AA973353, AW242590, N64735, AI681375, N40554, H87833, AA358852, T95005, T94951, AI434777, N91747, AI446623, AA225380, T73016, AA297496, AA650455, AA584756, AI309059, H77386, AA321010, AI251809, AA015948, AA634071, N51140, AW020891, AI032411, AA640563, T12424, T52786, R70884, X84712, AI000314, AI834262, AA629939, AA368749, AI358557, AA496309, AW384076, W81359, AA446645, AA372389, AA338238, AW271071, AI701898, AA573000, AI281622, H91062, AA229823, AI147511, AI627917, AA218835, AA947352, AA338237, AA932787, H87818, AI753131, AI668566, AW277240, AI751698, H91358, H91047, AA351868, AI679759, AI002863, AI819391, AI733523, AA228979, AI345256, AI940546, AA807704, AA649174, AA383937, AA935827, AW384100, AA496941, AI620666, AA507990, AA653881, F23268, AI689135, AW029626, R92703, AI888050, AA626828, H57752, AA196287, AC005722, AC005826, AC005702, AL049539, AF205588, AL022165, AC004686, AC005859, AC012085, AL031280, AL031287, AC005368, AL117355, AC005737, AC000086,</p>

				AC004593, AL022329, Y10129, U91629, AC005901, AC004662, AL031846, AC007253, AP000355, U18271, AC005539, AC007637, AC002402, AL024507, AC007263, AL021940, AF013593, AC004147, AC003688, AP000144, AC005297, Z92844, AP000156, AL109967, AL031737, AL035071, AC007656, AC005940, Z93023, AJ006345, AC008044, AC006459, AC006130, AC002400, AP000014, AL050318, AL122126, AC004617, Z98742, AC004884, AC005005, AC002073, L40817, AL031407, AL049709, AC002418, AL031602, AC004386, AC006468, AC006449, AC009501, AL132712, AL031685, AL133249, AP000557, U62317, AC006059, AP000347, AC006062, AC005015, Z84466, AP000493, Z73900, AC007671, L41140, AC000159, AL031657, AC003070, U96629, AL109847, AC007052, AC006254, Z68756, AC005480, Z84487, AC006992, AC003071, AL135783, AL133371, AL079340, AL031286, AC005740, U92032, AC007066, Z95118, U60205, AF222686, AL031587, AC004913, AC005076, AC004750, AC004915, AC007421, AC004647, AL031283, AL021977, AC006368, AP000310, AC000397, AP000116, AL035551, AC020663, AC007283, AC007092, AB023054, AL080317, AL049759, AC004079, AC004882, Z98052, AL133312, AC002430, AC007842, AC003107, AC005355, AC005484, AC007384, M91159, AL096774, AC007436, AC006441, AC004083, AC012627, AC004837, AB002155, AL031121, AC002310, AC005486, AC005179, AL022726, AC004106, AC006088, U02057, AL133163, AC007245, AC004910, AC006101, AL109980, AF049895, AC003081, AC007189, AC006222, Z95152, AC005585, AL031176, AC005365, AC000353, AP000356, AC004922, AC001231, AC005829, AC005081, Z82976, AC004081, AL023575, AL049634, AC005924, AL031656, AC003963, AJ006996, Z73417, AL096712, AL109839,

530	HCRPA46	874492	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 312 of SEQ ID NO:530, b is an integer of 15 to 326, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:530, and where b is greater than or equal to a + 14.</p>	<p>AC005921, AC004668, AC004865, AP000346, AF047825, AL031003, AL022323, AC000028, AC005833, Z95331, AC004671, AC006141, AL022337, AL022336, Z99496, Z97876, AC004638, AC006126, U89336, AC003015, AP000248, AL117344, AP001068, AL035460, AL031662, AC007207, AF186194, AC003030, AC005876, AC005358, AC005332, AP000165, Z97987, AL049544, AC005232, AP000695, AL034351, Z97198, AP000696, AC002470, AC009784, AL034397, AC009247, AL031577, AL117258, AC002381, AL049872, AC006148, AD000812, AC004703, Z92546, R87098</p>
531	HCRPV94	874495	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 550 of SEQ ID NO:531, b is an integer of 15 to 564, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:531, and where b is greater than or equal to a + 14.</p>	<p>AB014598, AL030998, AF082567</p>

532	HCRPX62	874498	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 602 of SEQ ID NO:532, b is an integer of 15 to 616, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:532, and where b is greater than or equal to a + 14.	R16588, R16531
533	HFKIJ16	874499	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 635 of SEQ ID NO:533, b is an integer of 15 to 649, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:533, and where b is greater than or equal to a + 14.	AI380837, AI927431, AF216312, E13203
534	HLISB93	874503	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 709 of SEQ ID NO:534, b is an integer of 15 to 723, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:534, and where b is greater than or equal to a + 14.	AI357582, AI741646, AI820619, AI627793, AW009919, AI017918, AI798971, AI860948, AW206216, AI128098, AA740516, AW006828, AI422019, AI401225, AI088674, AA568539, AI042028, AA936376, AI612768, AI223316, AI077637, AA825608, AA441918, AI400740, AI474329, AI224142, AA937106, AI767035, AI290559, AI436175, AI300696, AA456524, AA815007, AI219458, AI400537, AI421335, N98878, AA902406, AA455161, N52185, H97557, AI002655, AA919015, AI572174, N90331, AA442028, H98458, AI000140, AI792015, H98592, T11461, H92440

535	HDTLA27	874504	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 782 of SEQ ID NO:535, b is an integer of 15 to 796, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:535, and where b is greater than or equal to a + 14.</p>		
536	HCHCJ20	874505	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1121 of SEQ ID NO:536, b is an integer of 15 to 1135, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:536, and where b is greater than or equal to a + 14.</p>	<p>AI816386, AW247209, AA444018, T80511, AW163217, AI815446, AA338622, AW163745, AA359841, Z41863, AA634523, AA621265, AI884383, AA338360, AB023049, AP000513, AC006049, AP000512</p>	
537	HLDOG81	874506	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1220 of SEQ ID NO:537, b is an integer of 15 to 1234, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:537, and where b is greater than or equal to a + 14.</p>	<p>AW339982, AI827788, AI627750, AL038656, AI888509, AW156877, AI094580, AI963436, AI634293, AI891103, AW080820, AA910949, AW009916, AW338663, AA514770, AL037705, AI924086, AI951034, AI025380, AL038657, AI703238, N47212, AI688623, AI091742, N57407, AW188387, N32312, AA860531, AA863007, AA532789, AW188451, N6542, AI306506, W32410, AW188660, AA601517, AI304931, AW338673, AA912494, C75275, AI050054, AI075117, W15332, W32856, AW084306, AW081448, W37293, AA889232, AI302660, AA902855, AI888343, AA507932, AA987475, W39423, AA938584,</p>	

538	HPMLY88	874508	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1525 of SEQ ID NO:538, b is an integer of 15 to 1539, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:538, and where b is greater than or equal to a + 14.</p>	<p>AA974132, F34503, AI621117, N27606, N90139, AA987821, AA916382, AI299905, AA953919, AI282708, AI473985, AI803426, AW028183, AA825320, AW173786, AW338830, AI921646, AW157842, AA854048, AA910245, AA855143, R39105, AA989409, T28851, W37827, R63566, AW178890, AI673106, C75395, AA887708, AA885915, H19457, AI273149, AA911486, AW265368, H42573, AI457300, R63520, AA772638, AI824046, AW194001, AA548768, T11298, AA813624, N91931, AI811441, AI476381, AW080982, C75171, C01891, AA084007, AI554233, AA384963, F29838, AL042009, AL039390, AL046681, AL046137, AI358612, D45781, M25160, AF153191, X03747, U16799, AF202048, AF202049, M25159, X03883, X61433, J02701, Z99758, M75030, Z11797, U17061, J02787</p>
539	HIDACS0	874518	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 774 of SEQ ID NO:539, b is an integer of 15 to 788, where both a and b</p>	<p>AI985974, AI831129, AI701918, AI469233, AW007649, AI683794, W52775, AA921832, AA599078, AI000597, AA604667, AI669164, AI022848, AI620402, AA747513, AA713994, W52450, AI971470, AI351325, AI678922, AA852738, AI025094, AA809319, AW183139, AI700796, AI867406, AI290796, AA721118, W58770, AW001013, N67520, AW089434, AI968630, AA812494, AI468826, AA172207, AA172212, AI608636, N85575, AA173900, N84394, AA827709, AA173877, AA089754, C75113, AA335629, AI142956, AW103098, U51920, X86373, X16318, X16319, AL049776, U29893</p> <p>AI963808, AA527662, AI033700, AA811422, AI959767, AI277778, AI160624, AI458035, AA505696, AA227191, AI538253, AI301401, AA936616, AA460108</p>

540	HLYCA01	874519	correspond to the positions of nucleotide residues shown in SEQ ID NO:539, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 860 of SEQ ID NO:540, b is an integer of 15 to 874, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:540, and where b is greater than or equal to a + 14.	AW021176, AA640216, AA194176, W63704, W72405, AW020588, AI860160, AI963169, AI681768, AI677866, AI631777, AA830270, AA194175, AW305172, AI803557, AI696997, AI095536, AI677656, AI338525, AA150798, AA863348, AI281242, AA954686, AI265946, AA227927, H01350, AW276285, AA737409, AA430106, AA923590, AA468671, AA150674, AA714825, AI301123, H01304, AW273571, N50562, Z28949, AA782402, AA857623, AW371977, AI310720, AI354804, AA148462, AI968881, AI123867, AI637999, AW002622, AI969063, AA700782, AI699961, AI041858, AI097045, AI928059, AA683563, AI638646, AI190522, AI652908, AW440938, AI806213, C01494, N50620, AW363568, AW363567, D20573, AA284202, W76435, AW362797, AJ227895
541	HICRNF16	874522	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 535 of SEQ ID NO:541, b is an integer of 15 to 549, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:541, and where b is greater than or equal to a + 14.	AI209040, H86053, AW206470, Z29067, Z25434
542	HOEKX93	874524	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by	AI093004, AA532946, AA564084, AA507201, AA507134, AW006481, AI871173, AA552730, W94684, AI348304, AA878084, AI401530, AA534543, AI417039, AI768351, AI384018, AI832682,



543	HTFP72	874527	<p>the general formula of a-b, where a is any integer between 1 to 453 of SEQ ID NO:542, b is an integer of 15 to 467, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:542, and where b is greater than or equal to a + 14.</p>	<p>AI381790, AI708035, AA873199, AI301703, F21391, AW173369, AI018646, AI582667, AI581643, AI208881, AA908672, AA478298, AI093955, AI718804, AI675351, AA513024, AA977944, F22481, AA533319, AA532461, F16466, AA532891, AA588257, AA558343, AI382749, AA459680, AA587292, AA371783, AI581617, AA584023, AA459802, H43956, AI719400, AA320701, AA335295, H43908, AA365844, AI247163, C06460, AI581856, AI253013, AI344895, AI275296, AI251230, AI224758, AA364498, AI254294, H26864, AI250090, AI270854, F28916, AA536033, F23489, AI202611, AI223525, AI270980, AI434794, AI349890, AA327611, AA319916, F18547, F30398, AA708206, AA594821, F36609, AA640695, AI306848, AI306179, AW302783, AI318243, AI305366, AA878097, AA335481, D45451, AW268320, C20940, D45370, AR030258, AI254412</p>
			<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1197 of SEQ ID NO:543, b is an integer of 15 to 1211, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:543, and where b is greater than or equal to a + 14.</p>	<p>AL042016, AI298509, AA136996, AI453129, R83898, AA423903, AA085438, AA346815, AI708977, T47842, AI623675, AA521346, AI628135, AA102610, AI905470, AI446546, AI493169, AI092939, AI151462, AI493180, AI708719, AA043102, AA043103, AA604111, AI066719, T39655, AA131307, AI129409, AI005110, AI750391, AI446673, AA806476, AA582230, AA423882, W79107, AA112431, AA617707, AI766424, AA808647, AI376430, AI147567, AI378214, N22518, AI082502, AA722988, AA255666, AW152080, AI382456, AA706866, Z85986, A52140, AF034187</p>
544	HCRND05	874528	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1449 of SEQ ID NO:544, b is an integer of</p>	<p>AI760170, AI150687, AW273858, AI400198, AW062695, AI924082, AW087415, AI689214, AI684707, AA526748, AI566857, AI377786, AW167628, AA525309, R65808, R32753, AI927229, R32754, AI242434, AI927230, AI701965, AI956002, AI867076, AW292033, AI368435, AA897436, AI612972, AI221593, AI364630</p>

545	HCRNP66	874529	<p>15 to 1463, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:544, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 522 of SEQ ID NO:545, b is an integer of 15 to 536, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:545, and where b is greater than or equal to a + 14.</p>	<p>AW392670, U46347, AL119457, AL134542, AL134531, AL134536, U46350, AL134527, AL043003, AW363220, AW384394, AL134533, U46351, AL119324, AL119443, AL119396, AR066494, AR069079</p>
546	HAPCK19	874531	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 574 of SEQ ID NO:546, b is an integer of 15 to 588, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:546, and where b is greater than or equal to a + 14.</p>	<p>AI885516, AI547325, R24895, AW363358, AI547326, AA164922</p>
547	HWLIN80	874533	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1571 of SEQ ID NO:547, b is an integer of</p>	<p>AA587884, AI767423, AI393280, AI949839, AA446436, AI190288, AI559560, AI682501, AA026445, W52085, AI335906, AI675307, W23537, AI253394, AA918686, W52355, AW270884, AI926314, AI270610, AW129161, AA807077, AI581933, AI766485, AA977638, N74921, N67476, D25717, AA233959, AA446128, AW149000, C02436, AA026248</p>

548	HWMTA0 2	874534	15 to 1585, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:547, and where b is greater than or equal to a + 14.  Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1265 of SEQ ID NO:548, b is an integer of 15 to 1279, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:548, and where b is greater than or equal to a + 14.	AA502608, AI478744, AA045217, AI699980, AA813386, AA723372, AI433558, AI052065, AA113200, AA907374, AI424746, AI808683, H59204, AI341585, N69246, AI953729, T90351, AA099980, AI699473, T85849, AI766778, AA836395, AI802324, AI567411, AA630658, AA830372, AA584340, AR067863, U77949, AF022109, AJ223087, AJ009559
549	HCRQI74	874537	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1375 of SEQ ID NO:549, b is an integer of 15 to 1389, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:549, and where b is greater than or equal to a + 14.	AI346749, AI312720, AW084111, AI816832, AI621243, AI916669, AI309924, AI291557, AI458630, AW451021, AI571801, T26468, AW293308, AI346591, N52354, AI120629, AI824966, AI653039, AI290454, R20343, AI769740, R19490, AA915926, T26467, R43837, AW206912, H11896, W72861, AW206151, AI767801, R43726, W75957, AW196574, AI474938, F11673, AI657200, H41486, AA954054, AA582950, AB014554, AF034800
550	HCRMT48	874540	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 525 of SEQ ID NO:550, b is an integer of	AI741772, AW294773, AI915533, AW291354, AI745300, H82605, AW293578, AI089050, AA159011, AI660151, AW014671, AI807594, AI137668, AB014603

551	HDTJ085	874543	<p>15 to 539, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:550, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1075 of SEQ ID NO:551, b is an integer of 15 to 1089, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:551, and where b is greater than or equal to a + 14.</p>	<p>AI887728, AW057838, AI378621, AI522143, AI016980, AI561130, AI522026, AI005240, AI147473, AI559517, AA256451, C74989, R78188, AI289403, AI681611, AA731944, AI288392, H03832, R78244, AI701420, H03833, R77819, AA256323, AA505824, H01114, AI983828, R99504, R97982, AI686917, AI521228, H01115, R38045, R38042, R38134, AI364612, N56316, AA888634, AA094801, AA995973, AL119484, AL119439, AW392670, U46347, AL134530, AL134519, AL119391, AL119319, AW372827, AW363220, U46350, U46351, AL119444, AL119522, AL119457, AL119324, AL119443, AL119363, U46349, AW384394, Z99396, AL119497, AL119355, AL119483, AL134528, AL043003, AL037205, AL119401, U46346, AL042544, AL119335, U46341, AL134525, AL119341, AL119396, AL119418, AL134524, AL134518, AL042614, AL119399, U46345, AI142137, AL134538, AL119496, AL043019, AL042542, AI142132, AL042450, AL042984, AL042965, AL042975, AL043029, AL042551, AL119464, AL117441, AB026436, AR066494, AR060234, AR054110, A81671, AR043113, AR069079</p>
552	HIBEM35	874544	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1924 of SEQ ID NO:552, b is an integer of 15 to 1938, where both a and b correspond to the positions of</p>	<p>AI694131, AW005239, AA669418, AW271760, AI683493, AW002988, W74758, AI291081, AI760408, AW168256, AI338063, AI522303, AA503641, AW197676, AI863389, AI025917, R69505, AA765402, AI932989, H11347, AI916985, AI866944, AI084550, AI702087, AW294510, AI932986, AA047533, AI025180, AI924998, AA835901, AA335987, R45671, R72219, H17624, H23220, R76654, R44622, R72176, W74574, R46347, AA962190, R19347, R70396,</p>

553	HE9QB35	874545	nucleotide residues shown in SEQ ID NO:552, and where b is greater than or equal to a + 14.  Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1428 of SEQ ID NO:553, b is an integer of 15 to 1442, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:553, and where b is greater than or equal to a + 14.	R46437, AA249440, AW407351, AA351687, AA641292, AF150438, AI341777, AW407338, H17735, D20604, AC007327, AF161370  AI129333, AI300186, AA706487, AI623322, AW194754, AW140108, AI093486, AI936395, AA587424, AI521778, AI222194, W81371, AA905044, AW197515, AA873606, AA075771, W81629, T29810, AC009336, X15507, X56561, M87803
554	HCHMS55	874546	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1432 of SEQ ID NO:554, b is an integer of 15 to 1446, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:554, and where b is greater than or equal to a + 14.	AW245678, AW247182, AI972593, AW246638, AL039113, AA635532, AI739027, AW016854, AW016300, AI394048, AA142833, AW068260, AI669080, AI420874, AI080193, AA503817, AI343289, AW016301, R52416, AI239958, AA455481, R61423, W45615, AI739277, AI378464, AA883161, R52409, AI857686, AW068167, AW005773, AI337451, AW190775, AI266065, AW246010, R61381, AI241567, AA719327, AI640171, AI277571, AA324050, AI680628, AI758157, AI916131, AA782879, AI471730, R48703, AI865368, R48600, C75567, AI686454, T27923, W45561, AW070713, AW189143, F01282, AI611716, AW088956, AW188521, AI207844, AA639474, AI423701, AA455480, AA379331, C17774, AI972471, H26054, AW175761, AA455552, H73885, AI708130, AL042382, AL042544, AL119457, AW008166, AL119399, AL079794, AL119511, AL138457, AL043168, AL043152, AI471361, AW085786, AW073681, AI688853, AI524677, AI597918, AI567612, AI376872, AI348914, AI686926, AI866131, AI472536, AW117926,

	AI636619, AW006046, AI250369, AW089122, AI281757, AW081255, AI590423, AW149092, AL040694, AI684234, AI865931, AI862144, AL038529, AI828574, AI570966, AI698427, AI468930, AI434741, AI336575, AW151136, AI281782, AI608988, AW089275, AI473451, AI540606, AL119324, AI866751, AI872423, AI819106, AI358456, AI553645, AI284084, AW087193, AA814407, AL045349, AI690946, AI623379, AI624671, AW151948, AI799195, AI891125, AL079741, AL041220, AI888621, AI564247, AW150578, AL042515, AI954130, AI828818, AL041150, AI634737, AI783530, AI347701, AW087901, AI284131, AI289542, AI573026, AA908294, AI500061, AW051059, AL042488, AI866798, AA641818, AI873613, AI282319, AI801325, AI358209, AW162194, AI623941, AI758437, AI801322, AI584153, AW105601, AI832457, AW131999, AI590624, AI050881, AI933001, AI250293, AW130930, AI570169, AI923989, AI581033, AW148320, AL036673, AW243886, AW103442, AI866770, AW081515, AI433157, AI702073, AI612750, AI432736, AW081653, AI619754, AI916419, AI866608, AI859991, AW149287, AL040207, AI634251, AW088560, AL119791, AW051088, AI890907, AI679550, AI539800, AI434020, AI671679, AW104141, AI633125, AI309244, AI698391, AI690480, AI368943, AI538564, AI525669, AI250627, AI160954, AI915291, AW152182, AA012905, AL042866, AI914862, AI866801, AI560683, AW151892, AI249800, AI446124, AI582932, AI520946, AI288305, AI865334, AI521560, AI889189, AI862142, AI473536, AA449768, AI863382, AI475430, AI609684, AI866469, AI336633, AA502794,

	AI345567, AI884318, AI445990, AI445679, AW238688, AI499986, AW104062, AI479165, AA744531, AW193141, AI559312, AI539560, X55039, X05299, U35655, X55038, E04057, U20951, AF002714, U00763, AL117432, U01145, U77594, Y11587, M81784, X72889, AF061943, X56039, X98834, AF094480, U72620, I89947, S69510, AC006336, AF106862, E02253, S74156, S68736, AF113699, X99257, I48978, AL133093, AC005291, AR038854, A08913, AF043493, AL137660, AL137526, A08912, A08910, AL137539, A18777, A08909, I09360, AL133606, A08908, AF132676, AF061836, X52128, A08916, AL133568, U00686, AF040751, AL133016, U91329, AL122106, AF090896, AF017152, AL133113, AL133558, S83440, AL137658, E12747, AF061573, AF091084, I89931, I26207, AL117460, AR059883, AL117648, I49625, AL137271, AL110296, A08907, AL133637, AL137529, I09499, AL137273, S76508, AL110218, I89934, AF118064, AL049283, AL122050, U90884, AL133081, AF079763, AL080158, I66342, AL049460, AR038969, X80340, S77771, AL133014, AL133072, AL133560, AL110196, A77033, A77035, AF087943, AL110222, AL050172, AL117416, AF031147, AL137459, AL137533, AL050155, AF102578, AJ005690, U88966, AF111112, S61953, I96214, AR034830, AF065135, AL133565, AL133557, X92070, E07108, AL137555, X87582, AL122111, AL117583, U68233, I92592, AF205861, AL080137, X63574, AF111849, I41145, U62317, U92068, A52563, AL117578, I48979, AL137294, E02221, AL122121, AF026816, L19437, AL080154, AL137574, AF061795, AL137712, AF151685, E15582, AL137550, AL133665, AF030513, AL050138, AL137292, AF032666, AF182215, X96540, A08911, I89944, AF017790, Y16645, AL049300, AL137557, AL050024, AR029490, AF069506, AL133624, AF079765,

555	HCRPG51	874550	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1264 of SEQ ID NO:555, b is an integer of 15 to 1278, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:555, and where b is greater than or equal to a + 14.</p>	<p>AF090903, AL023657, AL096744, AF061981, AF185576, AL122118, Y07905, AL096751, AF057300, AJ012755, Z97214, AF057299, S78214, I00734, AL137705, X72387, I03321, E00617, E00717, E00778, AL117629, AL137547, AF180525, AL137665, AL137429, AF110329, X06146, AF051325, I42402, AL122098, AL117649, AF090886, U87620, Y09972, AL122045, AF125948, AJ003118, AL137527, AF104032, AL133619</p>
556	HKMLN95	874551	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1987 of SEQ ID NO:556, b is an integer of 15 to 2001, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:556, and where b is greater than or equal to a + 14.</p>	<p>AI123591, AA625223, AA088420, AI200451, AI863514, AI767379, AI749134, AI863526, AI339791, AI280973, AI280895, AA053166, AA558472, AI355115, H21596, F13615, N85138, AA088517, AW242425, AI148692, C00944, X90563, AF033103, AF033342, AF033343, U63415, U79012, L40904, AF156665, AF156666, AB011365, AF059245, AF103946, AJ006756, AJ006757, Y12419, Y12420, AR030509, U01841, U09138, Y12882, U84893, AB019561, D83233, U01664, U10374, Z30972, AJ243133, AJ243132, AF013266, AB005525, AB005526, AB005524</p>



557	HMIAD35	874552	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2510 of SEQ ID NO:557, b is an integer of 15 to 2524, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:557, and where b is greater than or equal to a + 14.</p>	<p>AI342767, R99590, N95053, AI074359, AW402507, AI630618, R43298, H84183, R25323, AA557498, AA446257, AW243239, AI583569, AW194714, AA551069, R92184, AA714014, AA557798, AI4333955, AI824194, N66644, R87671, T57874, T57956, AA313194, AI208421, AI921595, AA027072, AA156655, R87665, AI370681, R14400, AA352103, R87659, AA860614, AI140574, R24026, N58584, R87672, Z38717, AI870045, AW151040, AI277638, R84296, AA542839, R92288, AA307482, AI954284, AI472463, AI632684, N67635, AA442124, R18926, R84303, N72814, AI472552, AA876334, Z42525, R84309, T94235, R26521, AA091407, T26330, AA565557, AA609829, N53150, AF078850, U81186, AF064635</p>
558	HSYAM68	874553	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2653 of SEQ ID NO:558, b is an integer of 15 to 2667, where both a and b correspond to the positions of</p>	<p>AI654054, AA777790, AW118831, AI807933, AA204912, AI750036, AI922319, AA307744, AW149710, AI220354, AA954881, AA037461, AW021718, AI369003, AA446479, AA812671, AI796412, Z43835, D62485, AL119559, Z39900, AI978951, AA852817, AA319686, AA852816, AL039953, AA430172, AA609927, T35357, T35321, AA383343, R58429, AI184697, N86760, R43365, F07307, R17649, AF064104, AC006024, AC004899, AC006344</p> <p>AW374078, AI522263, AL135027, N98654, AW129530, AI744912, AI921308, AW298170, AA306189, AI378512, N51270, AI042527, AA028975, AI367359, AA721442, AI182847, AI692835, AA030054, AA481185, AA737502, AI350786, AI683938, AI867009, AA481500, AI142689, AI264543, AA708269, AW080670, AA854267, AW169590, N72881, W03106, N71768, N66131, AI471293, AI270046, AA214574, H98490, AI472606, H99050, AA887428,</p>

559	HDPAM86	874556	nucleotide residues shown in SEQ ID NO:558, and where b is greater than or equal to a + 14.  Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2593 of SEQ ID NO:559, b is an integer of 15 to 2607, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:559, and where b is greater than or equal to a + 14.	AW007921, AA301332, U77129  AA404235, AA452200, AI859555, AA629933, AI700486, R60866, AW192693, AI753505, AI609216, AW368608, AI681136, AI160089, AL039630, AA862328, AW084706, AI075205, AW339497, AI760883, AI339567, AW022639, AI806967, AA179268, AI365066, AA642409, AW105685, AI339346, W26428, AI953837, H72654, AI061344, W28185, AI796053, AA401261, AW118568, AI560224, N98233, AL045364, W35399, AI874187, R73919, T74450, AI140449, AA007193, AA401871, AI360268, N40604, AW406981, H03740, AI024161, AI000213, R41873, H63466, H97548, AA180475, W58764, T89579, AA181254, AA749384, AI248677, AI933404, R54609, H56233, H52952, AI916328, W02598, AA748000, R17258, AA313579, AI962042, H78864, AW402957, AA730015, W76051, H56151, W60542, F06063, AW316616, AA296128, F12545, AI672647, AI695696, AA179415, AI889968, AI364585, AA837995, H63411, AA323911, T81755, W93331, R69604, H63813, H78323, H93943, AI085812, H93944, N27831, H98470, W33012, W95035, T29602, H78324, H96072, H71380, AW392290, F10164, T81118, R67287, T89852, H02847, R13407, F08385, Z38983, N73611, AA090302, R52513, AW269661, R96535, D62732, AW075559, T81172, AI205920, R40919, R00249, T85548, AA179722, R52562, AA398464, AI609360, T58300, T85220, F04606, R58657, F25602, AW243073, AI950069, AW151501, W28479, R60285, R69694, AW249461, AA641818, AI445620, AI554343, AI963846, AL040011, AI886123, AI690813, AW194014, AI677824, AA911767, R92109, AW084447, AI864836, AW029186, AW148544, AI491842, AI698401, AW130356,
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	AI571699, AI872423, AW088560, AI581362, AI886440, AI288285, AI610667, AI439452, AW182790, AA872507, AI624304, AI918554, AI473554, AW080992, AI469270, AW166937, AI345416, AI345612, AI524179, W46493, AL138386, AI863382, AI539153, AW089275, AI345415, AW080298, AI049669, AW025279, AA514684, AI932794, AI866770, AI609069, AI476046, AA908294, AI927233, AI493032, AI886055, AI950729, AI432969, AI887765, AI784214, AI285439, AW130534, AI570169, AI453248, AI073952, AI536563, AI619813, AI860027, AI446373, AI270295, AI334714, AI419650, AI961589, AA761557, AI612750, AW150008, AI919500, AW263569, AI860697, AI554411, AW026425, AI632391, AI590043, AI683475, AW029294, AI890907, AA878790, AI564426, AI553645, L23959, A38388, Z77249, U78796, L40386, U58192, I89947, X63162, AL137550, AP000247, AL137529, AL137294, AP000130, AP000208, AF118090, AL110158, U88966, AL136842, AL137480, AF047716, E12747, AL117435, U91329, AL133072, AR038854, A08913, A08912, AL080086, I48978, E02349, S76508, A08916, A76335, X56039, AF090901, S77771, U62966, A08910, AL137537, A08909, E08631, AF158248, AL049300, A86558, A08908, AL137530, A08907, X70685, AR029490, AR011880, X82434, AF215669, I33392, AF141289, AB007812, AF039138, AF039137, AL050155, AF106657, AJ005690, AL080124, A18777, I89931, I32738, AL110225, X57961, AL050108, AL110280, I89934, I49625, AL049996, AL133640, AL049466, S83440, AF032666, X63410, U49434, A27171, Z97214, AL050366, AL137533, AF008439, AF067790, AL050277, AL137640, Y11587, A77033, A77035, AF087943, X80340, AL117416, AF183393, M86826,

				<p>Z37987, Y14314, AF199027, S79832, AL137527, AL096751, AF022363, AF104032, A08911, AL133010, AL080060, AR034821, AL080234, AL080162, AF061795, AF151685, Y07905, AL137292, AL122121, AL133568, AF113690, AF090934, AF017437, AL080156, AL133560, AF113699, AL117460, E06743, AF090900, I09499, AL122093, AJ012755, AF026816, L04849, D89079, AL117583, X84990, AL133075, AF090903, AL023657, U68387, AL137656, U78525, AL050393, U42766, AL133665, A03736, AF106862, AL137479, AL110218, D83032, AR053103, A15345, I79595, AF002985, AL122110, AF113694, AF106697, L19437, AF113677, AL050024, E03671, AB016226, AL137271, AL122106, Z13966, AL137711, Y09972, L31396, AF177401, AF185576, AL133113, L31397, I89944, Y10655, AL137459, AL133016, AL080140, AL050138, AC004200, AF028823, AF126247, AF067728, X87582, X06146, AL096744, AF207750, Y16645, AL049938, A65341, I48979, AL133080, AL122050, U90884, AL050172, AF079763, X55446, A93350, AL050116, U00686, AF117657, AF040751, X83508, X81464, AL049464, AL133637, AF175903, AF118070, AL137478, AL080159, AL080154, U95114, Z82022, AF200464, AL133624, AL117585, I17544, AF017152, AL122100, AL137558, AF061981, AL133619, D16301, U35846, Y08769, AL137539, AF111112, AL110171, AR013797, X66871, E05822, AL110196, AJ000937, A83556, Y10936, AL049430, Y13350, Z72491, E12806, AF153205, AL133557, AL049347, AF139986, AL133112, U49908, D55641, AL122049</p>
560	HNTMD17	874559	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a</p>	<p>AI949652, AI685745, AW195069, AI052515, AI697062, AA280974, AA707923, AI218290, AI199847, H98774, AI144534, AI073884, AI668804, N46000, N23495, AA011443, AI689592, AA251688, AA011444, AA453078, AI436247, AI080750,</p>

561	HEEX65	874560	is any integer between 1 to 1823 of SEQ ID NO:560, b is an integer of 15 to 1837, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:560, and where b is greater than or equal to a + 14.	<p>AW248798, AA716253, AI275839, AI122970, AI453068, AI768147, AA844253, AA718935, AA725825, AA199845, AW268712, AA682515, AW339219, AI498394, AW339546, AA772711, AI445896, AA719969, W60548, AA917362, Z39539, AI003641, AW084055, AW084063, AA251094, T77877, AI536979, R15292, Z45463, AI942282, AA506048, AI623949, F03470, F07768, AA838154, F04328, AI611294, Z42543, H22527, AI674943, F02062, Z40852, AI364258, AI962091, R42198, Z44339, AI025438, AA452910, AW235780, AA091738, R58217, F06562, W04953, AW377760, N45999, N55694, AI985580, AL117543</p> <p>AL135284, AW195652, AI492172, AW300531, AI334056, AI921269, AI017419, AI079507, AI138956, AI499016, N62394, N80209, N79360, AI934188, R99318, T72655, AA484807, AW439501, AW449451, AA041502, AA041403, R99412, W38499, T72723, AI673139, AI868062, AI457467, AI572468, H95855, X04325, I76175, X04070, AJ271753, M81447, X84215, M63802, X95311, X04303, L36875, M23565, L47127</p>
562	HHFJL44	874561	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1688 of SEQ ID NO:561, b is an integer of 15 to 1682, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:561, and where b is greater than or equal to a + 14.	<p>AI652047, AI796497, AI147530, AI628634, AI806666, AI126419, AI953655, AI651464, AI077355, AI147621, AA976545, AA406366, AA406459, AA234150, AA854449, AI458532, AI359880, R70839, AI766906, AW015806, AI935550, W15483, AA431949, AA443829, AI040405, AA476397, R79122, R83810, AI628751, AI868325, AW058660, AA663713, AI459031, AI984404, AI026812, H24631, AW020576, AW196384, R23619, AA127834, AI264888, AA476377, R73980, C20836, AA737872, Z38948, R21531, H01785, R21639, R23700, R26172, H04400,</p>

or equal to a + 14.	<p> F06029, R70786, AA476346, H24594, AA476327,  AA234980, AA657835, AW157005, AI028510,  AA992126, AA865262, H79308, AW274349, AI051037,  AA719292, AW302659, AW302705, AI061313,  AA503600, AL038705, AA679634, AA838190,  AW021583, AI284640, AW303196, AA578695,  AW245747, AW301350, AA644090, AI818231,  AW081194, F08248, AI572924, AL046409, AI687343,  AI754955, AW168453, AL042853, AI110770,  AI081147, AI002744, AI434695, AA287550,  AA808337, FI2561, AA631507, AW275719, AA491814,  AW265735, CI5363, AI554718, AI281881, AA581903,  AA584145, AA453558, H18914, AA629540, AA468022,  AA468244, AA402129, AW302013, AW028392,  AA904275, AA513544, R17793, AA508359, AW410354,  AI886432, AA580808, D83989, X55923, X55931,  X55924, I51997, AF015156, Z49816, AC006374,  AC004987, AC000066, AF001549, L47124, AC007324,  U67829, AC005815, Z98046, AL031054, AL022147,  AJ010770, AC008079, AC006336, AL121603,  AF227510, AC003692, AC006277, AF106202,  AL022400, AL032822, AC004066, AC005747,  AC005387, AC005154, Z69666, AC006241, AC007214,  AC007437, AC005911, AC004603, AC003683,  AC007043, AC002430, AC006568, Z82210, AC007193,  AL008716, AC005578, AC002549, AL034420,  AC006005, AL021546, AC007384, Z97205, AC006037,  AL050341, AL049829, AC007298, AL031295,  AL096861, AC004638, AC008064, AL031311, X75335,  AF123462, AL096776, AC005242, AL033381,  AC004945, AL033543, AP000298, AC005019, Z98742,  AP000365, AC005488, AC002289, AC007425,  AC004006, AC006130, AC005699, AC004478,  AC010202, AL035608, AC006998, U91328, AP000359,  AC008101, AB026584, AC006213, AC003007,  AC005603, AC005251, AC005829, AC003108, </p>
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563	HWHD94	874562	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 935 of SEQ ID NO:563, b is an integer of 15 to 949, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:563, and where b is greater than or equal to a + 14.</p>	<p>AP000459, AP000049, AC003104, AC005393, AC006596, AC007263, AC007011, AL133371, AP000311, AC004029, AC006057, AC000052, AC004592, AL109985, AC006344, AC006292, AB020859, AC018769, AL008709, AL080243, AL133399, AL049853, AL035415, AC004986, AL022320, Z98051, AC007385, AC003664, Z84469, AC007245, AC004833, AC004465, AC004210, AC005784, AC004650, AC007877, AF041427, AL035411, AC008012, AL021977, U66059, AL049544, AC008055, AF039907, AC004069, AC006022, AC005295, AP000962, AC002531, AL050401, U63312, U95742, AC002509, AL031777, AC000003, AP000140, AL078639, AC005632, Z86061, AL078477, AC004940, AP000088, AC008116, AC006288, M22900, AL022722, AC002385, U63630, AR036572, AL034408, AL035448, AL022328, AP000508, Z97634, AL023882, AC004675, AF088219, AL022336, AC006155, AL110292, AL121934, AC003003, AC005703, AC004388, AC006210, Z99570, AC004626, AC007564, AC006271, AP000204, AP000126, AL031286, Z84470, AC004643, AC005962, AC004551, AL034371, AL096775, AC006071, Z98304, AL022163, AI219645</p> <p>AL110396, AA331926, AA626240, AA984573, AW360879, AW360978, M79191, AB018255</p>
564	HWLAC81	874563	<p>Preferably excluded from the</p>	<p>AI802786, T24450, U59209, AF072223, U08854,</p>

565	HWLEQ08	874564	<p>Present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 489 of SEQ ID NO:564, b is an integer of 15 to 503, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:564, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 360 of SEQ ID NO:565, b is an integer of 15 to 374, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:565, and where b is greater than or equal to a + 14.</p>	<p>AF180322, U06641</p> <p>L02785, AR052312, AC005046</p>
566	HSQDM57	874565	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1638 of SEQ ID NO:566, b is an integer of 15 to 1652, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:566, and where b is greater than or equal to a + 14.</p>	<p>AI807430, AI676072, AI749532, AI887309, AA513783, AA837010, AA528036, AI452482, AW089714, AI743490, AI590949, AI911647, AI625817, AI819148, AI924914, AI761418, AW152378, AI818810, AI290928, AW241750, AI680714, AA485530, AI638802, AI735658, AW130312, AI000556, AI521413, AI669583, N62339, AA039895, AA948166, AI091096, AW084946, AW139663, AI565004, AA632893, AA514221, AA524664, AA235802, AA865491, AI828293, AI800154, AA470456, AA490345, AW073080, AI244948, AA602956, AA040027, AA640112, AA483492, AA918178, AI276739, C02969, AI627612,</p>



567	HTEJC93	874567		<p>AA169357, AA514889, H26425, T87972, AA343477, AA723462, R82948, H83098, AI432496, AI581370, H82876, T55847, AW393133, T55897, AW089750, AW393135, AA255742, AI745229, AI962074, AI470335, AI707637, AW013816, H45942, AA343478, AA343718, AA731056, AA903144, AA304118, AA344334, AA603266, AI247243, T10384, AA299545, AA301717, AA235803, AA485373, AW388463, AA169526, AA614843, AI273850, AA587177, AC004686</p> <p>H84612, H68440, H38005, R18676, F13210, T75350, AA911223, Z45334, R14079, H67952, A59459, A59517, U78581, D86176, AF048695, U78579, U78580, U52380, A59496, A59473, U52381, A59474, U52384, A59478, U52385, A59472, A59479, U52379, A59498, U52382, A59477, A59475, U52383</p>
568	HWLMQI 1	874569		<p>AI924920, AI753727, AW207160, AI914078, AA234929, AI439392, AI189476, AA532514, AI625486, AA622547, AW130733, AI696818, AI401099, AW008084, AI368479, AI368471, AI469802, AI916061, AI694524, AI833320, AI922024, AW137343, AA788954, AA257166, AI188289, N32400, AW131917, AI569287, AI798490, AW338407, AW080059, AW439587, T10596, AW051562, AW379054, AW392071, AI400854, AL119399, AL119457, AL119324, AL119511, AL042382, AL042544, AL043152, AL043168, AL079794, AL037081, AI559752, AI431323, AL042866, AI249497, AI525653, AL079741, AL119443, AL121306, AL039421, AI540354, AI267162, AI590043, AW392670, AI762707, AW163464,</p>

AI890214, AI679214, AI536685, AI683497, U46349, AI538850, AA641818, Z99396, AI690813, AI627874, AI500061, AI969655, AI446538, AW189802, AW059828, AW167155, AI815232, AW384394, AI434731, AI858827, AW198090, AW162189, AI095003, AI637584, AI633125, R39484, AW129106, AI879064, AI699865, AI452560, AW090498, AI890907, AA600363, AI909697, AI686808, AI491775, AW372827, AA836168, AL048656, AW363220, AI923989, AL041772, AI802542, AW022636, AL047849, AI440263, AL048323, AW020270, AL048340, AI581033, AL121286, AL134920, AI274759, AI799313, AW029611, AI698391, AI702073, AI538637, AI472487, AL036265, AI623941, AI628015, AI801152, AI624693, AL135047, AI677796, AL036361, AI345543, AW090429, AI094749, AI433157, AW088698, AI784233, AI224373, AI564719, AL038529, AI973152, AI801325, AI567128, AL119497, AI918435, AI690946, AI342210, AI699823, AW132056, AW089844, AI635492, AW020397, AI540789, AI689033, AI860027, AI635942, AW104724, AI571439, AI564723, AW302988, AI798351, AI801605, AI587114, AI538885, AI872489, AI521128, N80395, AI812107, AI537809, AW075667, AI560545, AW148408, AI587441, AW029401, AI798456, AI670895, AI817373, AW073270, AI524654, AI610690, AI682971, AI469532, AI866801, AW300889, R20540, U46341, AW087207, AI859991, AI334893, AI432532, AI828583, AW410842, AI687362, AI866472, AI591101, AI609069, AW020419, AI648699, AI287449, AI678480, H41759, AA744531, U46350, AI440238, AI799183, AI538259, AI538764, AI745076, AI244249, AI583065, AI589428, AW152604, AI445829, AW055252, AW162194,				
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	AL043293, AI539780, AI493593, AI445025, AL043345, AI632997, AI499325, AI554827, AW086113, AA808175, AI310575, AI500523, AI310582, AI619502, AI049859, AW026882, AL047344, AI475371, AL041150, AI284517, U77594, AR060234, Y11587, AR066494, L10353, AL049283, A81671, M92439, AL137488, A76335, AL117435, AF073993, AL080150, E06743, I48978, AF004713, I89947, Z97214, AL137539, AF097996, AJ000937, Y16645, AL050172, AL110222, AL133080, AF047716, E05822, AF139986, AL133061, AF126247, AF057300, AF057299, I68732, A21103, A08913, AL137548, A77033, A77035, AL137271, AF124728, AL117443, AF177401, AF106862, AR038854, AL122110, AF090934, AF100931, I33391, AF113019, AF090903, AL023657, A18777, M85164, D83032, I28326, AL049300, AR060156, A08912, AL137476, A08911, AL133560, A08907, AF113694, AR054110, AF031147, M96857, AF090900, AL122093, E06788, E06790, E06789, AF140224, AL117635, I33392, I48979, AF038562, AL110221, AL050116, S77771, AF201468, S76508, I79595, AF002985, L04849, X82434, AL049996, A65340, AL110196, A76337, AL080154, AB026436, AL110225, X83508, AL137267, AR011880, A08910, S78214, A12558, AL133637, AL133623, A08909, X66862, A65341, AL050024, AF215669, AL137640, AF115392, AF183393, AL117457, AL050149, AL137533, AF146568, AL080074, AR069079, I89931, AL122116, A08908, AR029490, AF118090, AJ003118, AL122121, AL117429, AR068466, I00734, AL096744, AF067790, AF028823, AL137526, AL117463, AF080068, AL050277, X52128, AL133075, E00617, E00717, E00778, S68736, U78525, AL117575, AR034821, AL133112, X59414, D16301, AL080124, AF111112, AL137478, Z72491, AL110158, AF125948, U42766, AR050959, U55935.

569	HNSAD12	874570	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2070 of SEQ ID NO:569, b is an integer of 15 to 2084, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:569, and where b is greater than or equal to a + 14.</p>	<p>AF091084, AL136884, X87582, AL049382, AL133557, I32738, Z35309, I08319, X63410, AL117587, AF087943, U67328, AL117416, AL133624, AL137529, A58545, I09499, AL050146, U72621, AL096751, AB029065, AL110269, A15345, A08916, AF090901, S83456, A86558, AL122050, AF017152, AF039138, AF039137, AL133568, AR038969, X65873, AJ001388, I03321, AC007221, Y17327, AR013797, AF113690, AF076464, L04852, AL137557, X79812, AL133640, I52013, AF111849, AL122100, AF117657, AL110228, AL133113, AL050393, E01614, E13364, AL122049, AL137479, AF090896, X06146, AL110199, A12522, U83980, AL080118, AL049347, AL117644, U76419, A83556, AL137258, AF141289, AL117460, X01775, X99226, I18358, I34395, AL049452, AL137550, AL133665, AJ005870, U49434, AL137298, Y11254, AF111851, AL137459, AF159148, AL137538, X84990, Z37987, Y09972, A07647, AF199509</p> <p>AW328196, AI885301, AI304846, AA305101, AA887010, AI805100, AI088777, AI807695, AI700200, AI582267, AA916924, AA707601, AA305064, AA975048, R56174, N35057, W69554, R61513, AI307316, AI858214, AA503755, AI559653, AI269422, AI799075, AI350312, AI308155, W69265, R53277, N91631, AI304832, AI418100, AI141947, AA975077, H08040, AI028322, AI659233, R55901, AA873740, AI366861, AI240182, R39807, R18693, T35958, H14874, AA583775, N68739, R55726, T16796, AI928120, R42071, AA083596, AA921690, F08538, AA401365, AI262465, W20149, T78296, AI797524, R41709, R52623, Z41511, AA962278, AW008743, AA588240, AW078949, AA568364, AI933255, F02418, AA608896, F04283, T35959, R61569, AI874285, R18545, R41531, R18163, H25141, H07934, F04502, T35961, R55816, R18494, R56062, F08274, AA917565, R55741, AI479201,</p>
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570	HBJEN48	874571	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 968 of SEQ ID NO:570, b is an integer of 15 to 982, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:570, and where b is greater than or equal to a + 14.</p>	<p>R12760, AI248995, N45070, T83763, D20863, R41342, F08044, F01990, F06146, AI014439, AI921998, AI253051, AL117555</p> <p>AI684897, AI200892, AI478735, AW274694, AI798122, AI554564, AI554553, AI681112, AA576942, AI281053, AI311456, AA291322, AI347538, AA291323, AA835642, AI417683, AW015465, AI620444, AI659037, AA731234, AA642457, AA689434, AA731232, AI797545, AI425078, AA947102, AI280944, AA809333, AA732232, AA737649, AA514684, AI335411, AI953765, AL039011, AW005614, AI954721, N29277, AW089006, AW129947, AI870198, AI280607, AI493740, AA848053, AI560679, AW029611, AW020397, AI589428, AI872722, AI475817, AI434242, AI866624, AI538805, AI567968, AI361586, AI241800, AI358685, AI918370, AI401699, AI572017, AI744243, AI634919, AW169462, AI631796, AI274553, AA836606, AW151652, AI689614, AI884419, AI538692, AI540606, AI375730, AI583578, AI824557, AI610681, AI699011, AI669015, AI954265, AI689077, AI648502, AI537925, AI634244, AI362637, AI564290, AI826230, AI500113, AI349012, AI318603, AI564144, AW074172, AW303152, AA575874, AI684129, AI345778, AI453328, AI621171, AW080076, AA831984, AI537677, AI701074, AI889306, AL135618, AI620007, AI250627, AW194185, AI539687, AI887214, AI469516, AW129433, AI284020, AI221076, AW102858, AA602479, AW327759, AL047184, AI590943, AI859123, AW192245, AI356065, AI249274, AI520785, AI559558, AI570966, AI682891, AW080326, AI630947, AW080909, AI360560, AI241812, AW265004, W45039, AW080717, AI783861, AI909661, AI452993,</p>
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571	HWMBMI 3	874573	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 858 of SEQ ID NO:571, b is an integer of 15 to 872, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:571, and where b is greater than</p>	<p>AI339104, AA861042, AA134985, AA868144, AA134946, AI626100, AA922724, AA535447, AA056635, AA308766, D25742, AA916634, AA551763, AA873574, AW192836, AR044148</p>

572	H6BSM15	874577	<p>or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 719 of SEQ ID NO:572, b is an integer of 15 to 733, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:572, and where b is greater than or equal to <math>a + 14</math>.</p>	AA775778, AA757125, AI150241, AA838682, AA069888, AI224530, W37073, AI571201, AA280088, AA180829, AA551358, AI198896, AA789242, AI088743, AA313833, AI301947, W46182, AI335114, AA723621, AA242964, W63551, AI041609, AI091063, AI859174, AA244165, AI359616, AI219023, AA095041, AA961762, AI022251, AI804039, AI808187, AA180788, F36871, AW005459, AA588269, AI223243, AA778139, AI004938, AA515424, AI804041, AI423085, AW183600, AI186337, AI494381, R99921, AI333959, AI743641, AA658557, AA031356, AA242808, AI769255, AA057167, AA244351, AI193789, AI122572, F28054, AA694424, AI289215, AA706689, AW265213, AI025858, AA242829, F34646, AA627819, AA235287, AA303477, AA988111, W95169, W95132, AA737959, AA665063, AW008787, AA242783, AA255455, AW296694, AI298829, AI582739, AA339643, AI435326, AI350635, AA280017, R15811, AA860877, AI056366, AI126978, AA879084, AA815469, N89766, AA483997, AI208662, AA070800, AI720351, AA483308, AA385786, AA705997, AI360959, T84830, AI360958, AA256788, AA491729, N90283, N56211, F30199, AA973367, AA865322, W37072, AA031599, R99742, AW074437, AA299478, T25729, AI581807, AA773488, AA854587, AI160483, AA773691, AI393846, T66437, AI079152
573	HCQBD30	874578	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 555 of SEQ ID NO:573, b is an integer of 15 to 569, where both a and b</p>	AW205864, AW192638, AW006385, AW005483, AA824263, AI142819, AI344314, AA471050, AI675040, AI738525, AI869254, AA603649, AI826701, AW136422, AA349312, AA352245, AA513376, AI473902, AI307409, AI335461, AI344116, AI344927, AI344925, AI345107, AW268275, AA564375, AI307434, AI318231, AW057846, AI344946, AW090819, AW207567,

574	HTEE283	874580	<p>correspond to the positions of nucleotide residues shown in SEQ ID NO:573, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1704 of SEQ ID NO:574, b is an integer of 15 to 1718, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:574, and where b is greater than or equal to a + 14.</p>	<p>AI868916, AI685626, C01650, AI348979, AI345050, AI349742, AI349945, AI252714, AI335443, AI792528, AI366990, AI309420, AW268933, AW268740, AI311280, AW303051, AI345584, AI591260, AI612044, AI583824, AC001228, AC005950, U89364, AF000571, AJ006345</p> <p>AI652168, AI651235, AL042672, AA400642, AA400512, AA858062, AI088345, AA723155, AI338998, AW044201, AW136063, AI884679, AA705472, AA262758, AA704320, AA291080, AI811206, AA723178, AA291079, AA262837, H05256, AI968448, R24786, AI910465, AI025371, R24812, AI797676, AA724915, AA541358, AA343915, R45518, R14022, T87745, AA134231, AW247425, R16262, R15757, AA284134, R22161, AI699575, AW387568, C05949, W74109, R45541, AF168132, AL080140</p>
575	HBXCF35	874581	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1530 of SEQ ID NO:575, b is an integer of 15 to 1544, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:575, and where b is greater than or equal to a + 14.</p>	<p>AA127739, AI742154, AI333531, AI052663, AA127793, AI692283, W45616, AA846495, AA481573, AW008912, AA281508, AA287977, AW166514, AI159991, AW167523, AA281507, T96310, AW137033, T96311, AA811477, AA731897, AA743738, AA826191, AA831820, AA767556, AA481261, R39181, AA731754, AA013312, AI569091, AI300619, AI598243, AI095640, AA287919, AA133808, AI809743, AA452275, AW028689, F10571, AA452825, Z39078, AA286960, AA412437, AA911547, AA910396, AA885060, AA694317, AA215310, T98829, AI972552, AA133667, T99133, AA428756, AA452964, AA496281, T07471, W22515, AA991752, AA707671, AA670160, N99622, AI914231, AA872108, R84735, AA412436, W45562, C02163, AI884622, AP000516, AB014087, AC004190, AB014086, AC004188</p> <p>AA609891, AL121603</p>
576	HWMBF85	874584	<p>Preferably excluded from the present invention are one or more</p>	



577	HCROA06	874588	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 646 of SEQ ID NO:576, b is an integer of 15 to 660, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:576, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 560 of SEQ ID NO:577, b is an integer of 15 to 574, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:577, and where b is greater than or equal to a + 14.</p>	<p>AW025497, AA934033, AW027391, AI279552, AW190440, AI829980, AI936913, AA493644, AA493494, AW015057, AA179182, AA664457, AA321511, AI912710, AA081836, AI879337, AA150887, AA452922, AA366205, AA493856, W81213, AW168414, H47788, W37231, W30867, AA587437, AW170353, AA334943, AI057549, AW385257, AW387041, AA595193, N80045, AI346027, AI718738, AW163282, AI702793, AW382665, AA339133, AI137514</p>
578	HAPAY77	874590	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 925 of SEQ ID NO:578, b is an integer of 15 to 939, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:578, and where b is greater than or equal to a + 14.</p>	<p>AA490685, AI753700, AI214598, AA527740, AA651751, AI417662, AI673636, AW302471, AI984768, AA628084, AA501592, AI537648, AA664579, AA490463, AA357394, AI915016, AA410310</p>
579	HUSYW93	874592	<p>Preferably excluded from the present invention are one or more</p>	<p>AW294990, AI609583, AI708016, AW006108, AW163632, AA054347, AI076486, AA805672,</p>

			<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 764 of SEQ ID NO:579, b is an integer of 15 to 778, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:579, and where b is greater than or equal to a + 14.</p>	AA063039, AA430074, AA888790, AI014918, AI828713, AI221602, AA579954, N57530, AA593129, H91141, AW130274, AW408192, AW162983, AI536783, AW131695, AA541779, T99047, AW075255, R64292, AA687588, H63290, R64176, H63732, AI927555, R77508, R84822, AA506597, H83676, AA320359, AI818493, AI688753, H91189, AA719412, AA063074, AW059671, R00556, H94447, C01999, AI280539, R87805, AW009011, R48665, H99403, R62277, F28513, R50507, AA093376, R00662, H94441, H21809, AW265154, R50593, AI918452, R48566, T25095, AA089719, W37374, AI924051, AW151974, AI686576, AW022904, AI363944, AA838319, AA641818, AI866469, W60360, AA715307, AW087217, AI872423, AI866465, AA761557, AI801325, AI673278, AA809974, AL038635, AI538850, AI859991, AI582932, AI633125, AI815232, AL045619, AI889189, AI567971, AI927233, AA748353, AI491842, AI114461, AI440238, AI559752, AI686565, AL048538, AI631240, AW020693, AI611728, AI923989, H41759, AI469754, AI912573, AI086783, AL045375, AI889191, AI890907, AW160905, AI909661, AI049859, AI613038, AA587120, AL121328, AA282824, AI827229, AI521560, AL080011, AI683395, AL045620, AI887785, AI798404, AI471909, AI289791, AI683568, AL121270, AI064830, AI590043, AL079963, AL121463, AI539800, D44497, AR015970, AF076464, AL117590, AF090934, AL133049, E12888, Y10936, AL137281, AL133015, AL133558, X57961, AL122049, D87747, Y13350, E08516, AL117635, I68732, A20553, U30290, X70685, L04504, AC004200, A08907, X72624, AR034821, AL080234, Y09972, Y13653, A08908, X06146, U42766, AF069506, AL117457, M85165, AL137275, AL133072, AL133623, AI2522, AL122110,
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580	HCROE11	874594	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 612 of SEQ ID NO:580, b is an integer of 15 to 626, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:580, and where b is greater than or equal to a + 14.</p>	<p>AL133080, AF080622, AF126247, AL133053, AL133031, I28326, U02475, AL117582, U75304, AL049426, AL133113, D83032, I89944, I89934, AC003686, AF026816</p> <p>AW176083, AA318915, W22801, AI685631, AF123462, L14851, L27869, AB018286, AJ006804</p>
581	HWLVF65	874595	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 631 of SEQ ID NO:581, b is an integer of 15 to 645, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:581, and where b is greater than or equal to a + 14.</p>	
582	HWLWU6 <sub>2</sub>	874601	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 355 of SEQ ID NO:582, b is an integer of 15 to 369, where both a and b</p>	<p>AL043791, AC005630, AC006328</p>

583	HWLFG75	874603	<p>correspond to the positions of nucleotide residues shown in SEQ ID NO:582, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1255 of SEQ ID NO:583, b is an integer of 15 to 1269, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:583, and where b is greater than or equal to a + 14.</p>	<p>AI356559, AW163067, AA443325, AW005140, C18386, R15375, R17389, R60462, H16941, AA442531, AA740299, AA025666, AA443338, R42116, R60229, R42625, AW444512, AW450707, AW157098, AA724594, AA978110, AI810652, AA927875, AI924004, H16834, AI886594, AI376913, AA609873, AW173645, AA578062, AA578362, AA467933, AI147260, R52646, AI672253, AI347103</p>
584	HBCCB62	874605	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1929 of SEQ ID NO:584, b is an integer of 15 to 1943, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:584, and where b is greater than or equal to a + 14.</p>	<p>AW361899, AW360942, AA152037, AW376508, AW360762, AW376484, AW377034, AA143780, AA130547, AW377083, AW362544, AA316326, AW062530, AW360980, AW376475, AI813806, AW361304, AA581220, AI829351, AW363244, AA053595, AW376234, AA132781, AA055605, AA099810, AW391364, AW364488, AW360772, AW376489, AW364936, AW376483, AA133927, AA827515, AI891116, AA053542, AA132613, AI590356, AA134894, T29557, AA366310, AA580464, AW360788, AW383505, AW383507, AW362547, AW364960, AW383659, AA127122, AW376062, AW337334, AA134921, AW383465, AW176585, AW383654, AA132368, AW377162, AW360989, AA130584, AW375981, AA366576, AA055606, AI926514, AA151939, AW362727, AA132490, AI940543, AA132688, AL121028, AA126970, AW374618, AW376560, AA327327, AA148141, AW007961, AA053080, AW393447, AW383479, AW193074, AW383495, AA058456, AW383456, U53097,</p>

585	HWLVN89	874607	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 563 of SEQ ID NO:585, b is an integer of 15 to 577, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:585, and where b is greater than or equal to a + 14.</p>	<p>AW373781, AW373783, AW373636, AW373627, AA134992, AI940526, AW373707, AW361514, AW365061, AW372246, AW176545, AW375748, AW373705, AW360825, AW375755, AW375758, AW363272, AW375920, AW375781, AW375773, AW391821, AW360800, AW388881, AW389306, AW301319, AW363275, AW361642, AA100303, AW376258, AW389268, AW374922, AW376502, E01630, M15042, M29540, M17303, I08156, AR044683, A43169, AR052807, AR052808, A39900, M16234, X16455, I08155, AC004558, I08165, M29541, A43167, I08158, M18216, M18728, E01972, E01971, X52378, D90064, X16356, I08161, A43165, D12502, I08160, J03858, I08159, I08157, X16354, I08137, D90313, E03352, D90311, E03350, M69176, M72238, D90312, E03351, AC004785, AC005797, X16454, X98311, L31792, AF006622, E03349, D90278, M59256, M59260, M59258, M59257, M59259, M59261, U04349, M59262, M76742, M59709, S74647, A37261, X62151, M16337, M17082, L00693, L00692, D90277, E03348, M22433, AA631275</p>
586	HTXQF81	874608	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a</p>	<p>AA828034, AI379959, AI857494, AA766435, AA251105, AA252357, AW449785, AA811081, AA825520, AA626324, AW451092, AI281315, AI281259, AI653216, AA767770, AA961612, AA884914, AI910531, AA883131, AL117637</p>

		<p>nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1226 of SEQ ID NO:586, b is an integer of 15 to 1240, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:586, and where b is greater than or equal to a + 14.</p>	<p>AA887676, AI280907, AA622341, AA161115, AW386295, AA421577, AA552244, AA574027, AA453330, AI523581, AA826619, AA464842, AA766218, AI246562, AA429353, N63397, AA464528, AA293567, N98676, AI688036, AA897561, AI831467, AA424522, AA160777, AI381579, AI991221, AA130549, AW001996, AI992166, AI857333, AA424374, AA430526, AA777100, AI148183, AA026078, AI332571, W92874, AA099121, AI057323, AI174284, AA421006, AI800148, AA293398, AA856632, AA159370, AA453201, AI720789, AW001345, AA430611, AA428764, AA130586, N95686, AI819980, AA856698, AI831247, AA434191, AA808470, AW406028, AW386371, AA029925, F22574, AA454167, AA402802, AW272436, AI801083, AA430426, AA999657, AA832420, AA857226, AI871010, AI273391, H47425, AI598093, AA830492, N73100, AA826723, AI904954, R96443, AA086361, AA449966, AW193589, AA505268, AA315443, AA053737, AW304217, AA158842, AA947200, AA921703, AA115286, AA758930, AI304791, H69012, AA429056, AW302628, AI091522, AI299197, AW328355, AI719387, AI086972, AA661521, AI935183, AA053217, AI337894, AA588803, AI347946, N66153, AI498213, AW069810, H75395, AI587160, AW387616, AI091629, AW387528, AA402306, AI457944, AI923632, AW387610, AI214251, W17167, AI934695, AW387609, AI089510, AA723089, AA687919, AA159162, AW387605, AW387556, AI718119, AW387612, AW387532, AI261968, AA527012, AW387677, H47338, AW387679, AA759077, AA340466, AW387539, AI261532, AA029924, AW387625, AA761238, AI830407, AW387557, AW387547, AW387583, AW387607, AW387533, AA043896, AI479890, AI907892, AW387587, AA371931, AW387516, AI125665,</p>
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587	HCQDD61	874609	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 861 of SEQ ID NO:587, b is an integer of 15 to 875, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:587, and where b is greater than or equal to a + 14.</p>	<p>AW387597, AW387585, AW387688, AI719846, T99527, AW387608, AW387554, AW387586, AA853552, AW387580, AA099122, AA025486, AW387559, AA379381, AA100577, AW387569, AA852809, AI863946, AA852810, AW387634, AW387584, AA496540, AW178502, AW387595, AW387596, AW366120, AW387553, AW387676, AA617664, AW387668, AI368248, AW387624, T99421, AI610373, AW387631, N92482, AW387694, AA451772, AA657982, AA361238, AA320810, AW379792, AW387558, AW387602, AI720333, AW387646, AW387695, AW387648, T29194, AW387550, AA513191, AI197850, AI939998, AA477464, AW387515, AW387641, AW387601, AW387667, AW263462, AW387636, AW387510, AA161192, R96442, AW387702, T95659, AW387627, AW387591, AW387640, AA290976, AW387544, AW387630, AI707897, D20308, AA159099, AW387621, AW387687, AW082041, AA159106, AI907826, AW387655, AA285059, AA853553, L09604, AF196779, U93305, U16149, AA159465, AA629238, AI364502</p>
			<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 861 of SEQ ID NO:587, b is an integer of 15 to 875, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:587, and where b is greater than or equal to a + 14.</p>	<p>AI541205, D50992, T18597, D59751, Z33559, Z32887, AI525500, AI557312, AI557082, AI557533, AI525302, AI535639, AI535660, AI525556, AI557262, AI526078, AI536138, AI541321, N71206, AI525852, AI525316, AI525661, AI557084, AI541450, AI557809, AA058620, AI541075, AI536150, AI541365, AI525856, AI541353, AJ239433, AI557474, R29657, AI546829, AI541034, AI541346, AI540974, AI536070, AI547177, AI535994, AI557408, AI557543, AI557039, AC006544, AC007387, AR050070, A62298, Z30183, A62300, A82595, A82593, U94592, U45328</p>
588	HMCZ52	874610	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a</p>	<p>AI638649, AA554045, AI916034, AW363225, AW363239, AW363251, AI636959, AA994913, AW195875, AW363235, AW363241, AI824374,</p>

589	HDPMG95	874611	nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1503 of SEQ ID NO:588, b is an integer of 15 to 1517, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:588, and where b is greater than or equal to a + 14.	AA928829, AW363263
			Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 857 of SEQ ID NO:589, b is an integer of 15 to 871, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:589, and where b is greater than or equal to a + 14.	AI800642, AW263554, AI887303, AI458021, AA314882, AI130978, N26710, AW241266, AI699405, AA182774, AI360350, AI311855, AI005375, AI271798, AI311844, AI160723, AA742481, AI566528, AI698216, AW129007, AA492214, AI743839, AI266624, AI301005, AI287538, AA659788, AW268889, AA905272, AA582830, AA046335, AI202764, AI300917, AA927589, AA513425, Z25235, N67557, AA471214, N34591, AA878914, AA298547, Z28858, AA639426, AI337479, AA770439, AA598461, T57131, AI557848, T57062, AI951303, AI183850, AW362063, I95752
590	HETAD58	874612	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1552 of SEQ ID NO:590, b is an integer of 15 to 1566, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:590, and where b is greater than or equal to a + 14.	AL043714, AA594012, AA127722, AW119061, AW303419, AI972370, AI435432, AI492876, AI826550, AW294638, AA127777, AI379516, AA131029, W30941, AA778421, AI768172, AA476693, AA424521, AI351027, AI276089, AA424355, AA927857, AI827221, AI810729, AA961627, AA723153, AA723176, AW303969, N59379, N76483, AA496984, AA812119, AI867487, N59361, AI082110, N29744, AI148665, AI904996, T51025, AA142848, AA912758, AI283747, W02732, AI282438, AI369934, T51117, AW183449, AA863467, AI382967, AA490582, AA813469, AA336481, R43451, AA863119, AI092645, N76464, F34319, AI870701, AA090677, AC004827, AB028994
591	HUFAT62	874614	Preferably excluded from the	AI824005, AI307247, AI625754, AW261982,



592	HODCH47	874615	<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1178 of SEQ ID NO:591, b is an integer of 15 to 1192, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:591, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 387 of SEQ ID NO:592, b is an integer of 15 to 401, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:592, and where b is greater than or equal to a + 14.</p>	<p>AI679467, AI078259, AA122264, AI335252, N27830, AA994930, AA111902, AI498311, AA373210, AI625756, AA633551, AA455980, N21680, AA085843, AA938642, H91768, AA371497</p>
593	HWLV180	874618	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 640 of SEQ ID NO:593, b is an integer of 15 to 654, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:593, and where b is greater than or equal to a + 14.</p>	<p>N30618, AA740983, AI128279, AW377181, AI160827, AI128274, AI222682, AI872758, AI590486, AI399979, AA523695, U93305, AF196779, AF165926, AC004983, Z85986, AL031681, U80017, AL033527, AC006160, AF045555, AL132712, AP000036, AL050307, AC002470, AL121603, AL031003, AC005255, Z98884, AF001549, AC005300, AC005031, AC004033, AC005486, AC007386, AC005189, AC005288, AL024507, AL049569, L44140, AC005412, AL022721, AP001063, AC005924, AC009509, AC005081, AL050332, AL049699, AL049631, AC002456, AP000345, AL021154, AL035458, AC007041, AC005730, AL049759, AC006367,</p>

594	HNGBW96	874619	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 668 of SEQ ID NO:594, b is an integer of 15 to 682, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:594, and where b is greater than or equal to a + 14.</p>	<p>AL035413, AP000510, AC007688, AC002418, AC004386, AC005800, AL080243, AC007899, Z99495, AL034420, Z97832, AL049589, AC004000, AF111168, AC006071, AC005011, AL049856, AC002544, AC005071, AC005736, AC005332, AC005057, AP000155, AC009516, AL109627, AC005562, AC005899, AC004382, AF053356, AC007327, AP001052, AC006241, Z97989, Z82244, AF196971, AC004253, AP000047, AC004805, AL139054, AP000263, AC002288, AC002394, AF030453, AC004813, AC005377</p>
595	HOSOL09	874620	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1416 of SEQ ID NO:595, b is an integer of 15 to 1430, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:595, and where b is greater than or equal to a + 14.</p>	<p>AA748492, AA281066, AI038581, AI042300, AA588218, N95542, AA243343, AA448626, AA603589, AA452281, AA824559, AI524537, T50481, F10009, AI004187, AA810738, T63277, C01253, AA876044, AI557234</p>
596	HWLMK5	874621	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1416 of SEQ ID NO:595, b is an integer of 15 to 1430, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:595, and where b is greater than or equal to a + 14.</p>	<p>AI913535, AI762854, AI677912, AI758705, AI825702, AI740876, AA412665, AI800271, AA883055, AI823434, AA134753, AA845774, AA491093, AW204604, AA598723, R73497, AI535824, R73498, AA134752, AI535821, D62016, AI332677, AA993841, AA293681, AI598069, R77771, N68128, AA761684, AW370473, AW370408, AI758562, AI754802, AA075272</p>
596	HWLMK5	874621	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1416 of SEQ ID NO:595, b is an integer of 15 to 1430, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:595, and where b is greater than or equal to a + 14.</p>	<p>AI718512, AI748996, AI951481, AI745085,</p>

6	<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1583 of SEQ ID NO:596, b is an integer of 15 to 1597, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:596, and where b is greater than or equal to a + 14.</p>	<p>AI809713, AW188163, AW103479, AI721217, AW007667, AI828182, AW004850, AI628538, AI686915, AW070523, AI962963, AI697298, AI471537, AI635101, AI889467, AI978632, AW190605, AW167961, AI571882, AW129970, AI922593, AL047838, AI579919, AW055284, AI955311, AW242156, AW272287, AI743468, AW129586, AI624711, AI625272, AI684079, AI679591, AA424668, AI679333, AI469222, AI571037, AW029090, AI809712, AA130871, AA528645, AI459465, AI540550, AA528637, AI024785, AA406196, AA411381, AA577525, AI333612, AI687294, AI241214, AI299682, AA483903, AA847578, AA424571, AI889684, AA502398, AA580416, AA130926, AA835115, AI707527, AW075441, AI216279, AI886530, AI579897, AI285185, AI285353, AA908633, AA724605, AI219442, AI269213, AI038566, AW196292, AW361641, AI824537, N92767, AA527850, AI475347, AI078813, AA443854, AI074078, AA846205, AI803815, AI300799, AA983659, AI689710, AI289495, AI022819, AA548485, AA554075, AA235136, AW193746, AI538623, W33013, AA158014, W32964, AI123271, AA635113, AI567018, AA157929, AA526284, AA113218, W39707, AI702978, AA137210, AA446644, AI364251, AA493629, W15485, W19420, W35400, W37704, R81916, AA146623, AI494071, AW132100, AA055858, AI215543, AA158159, AI625623, AI284796, AA160230, AW372994, AI362334, AA234829, AI890170, AA492337, AI540630, AA975975, AI355511, AW372993, AI273060, AI269466, AA121220, T92910, AA921713, AI879463, AA911150, AA121180, AW188810, AA160229, AI420818, AI027882, W37705, AI261387, AA952991, AI459610, R81812, AI471346, AI287287, AA975982, AA056345, AI868149,</p>
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597	HWMBE67	874622	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 588 of SEQ ID NO:597, b is an integer of 15 to 602, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:597, and where b is greater than or equal to a + 14.</p>	<p>AI364013, AA843969, AI648613, AW189830, AI860872, AI264210, AA991650, AI870054, AA055808, AA157928, AI540417, AA948420, AW168044, AW149942, AW168037, AW385044, AI459644, AA143554, AI340883, T27688, AW051181, AA319982, AI886222, AI611741, AA158227, AI926113, AW025152, AI687877, AW050533, AI521903, T10928, AI648637, AI915472, AI682186, AI473510, AW364115, W31924, D25749, T93002, AA136491, AA053153, AW189650, W31719, AA056712, AI559842, AA121076, AA659825, AA610345, M33011, X14758, M26481, M32306, I06776, M93036, M93030, M93029, I06778, M93034, I06777, M93033, M93031, M93032, M93035</p>
598	H2CAA08	874623	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 418 of SEQ ID NO:598, b is an integer of 15 to 432, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	<p>AA617802, AI027663, AP000542, AJ239321, AC007036, AC002379, AF117829, AL031074, AL031054, AC006465, AL133247, AL133396, AF003530</p> <p>AA306953, U53823, U49184, U49221, U49185, AB016425</p>

599	HCRNH24	874624	NO:598, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1305 of SEQ ID NO:599, b is an integer of 15 to 1319, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:599, and where b is greater than or equal to a + 14.	AI680732, AA129660, AA932629, AI302712, AW296343, AW103527, AI696519, AA889147, AA962323, R85409, AA342648, T78937, N71662, H90863, H82431, H95348
600	HUFDO17	874625	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 959 of SEQ ID NO:600, b is an integer of 15 to 973, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:600, and where b is greater than or equal to a + 14.	AI219807, AA459990, H47315, H03229, AA461319, R96595, H83599, D79440, AW022256, AA249406, T06164
601	HE8QX06	874626	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1459 of SEQ ID NO:601, b is an integer of 15 to 1473, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID	AI655888, AA496957, AI082409, AA481278, AA256248, AA424608, AA255986, AA481584, R72315, W92878, R16032, AW008646, R66195, AI669890, H56520, R67074, AA401875, R72278, W92777, AA480879, R62194, AA398470, R62168, R62278, R26962, AI572490, D63178, H56702, AA835846, R26733, AA424540, AI745338, AW051062

602	HWMCF68	874628	<p>NO:601, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 467 of SEQ ID NO:602, b is an integer of 15 to 481, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:602, and where b is greater than or equal to a + 14.</p>	<p>AA873395, AI732843, AI732974, AI245199, AI791371, AA746322</p>
603	HWAGI58	874630	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1653 of SEQ ID NO:603, b is an integer of 15 to 1667, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:603, and where b is greater than or equal to a + 14.</p>	<p>AI928153, AW293147, AI922880, AW189087, W38669, AA436733, AA406426, AA488113, N92583, AI949783, AW002403, AI671171, AI620653, AI597676, AA664702, AA410435, AA484729, AI554442, W37186, AI424838, AA570240, AA227850, AI083617, AI401498, AI440533, AW148677, AW449553, AI521319, AI290235, Z33599, AA137130, AI813887, AW021759, AA127412, AW029443, N22858, AA719092, C03295, AI806504, AA137059, AI184062, AI754123, AI273172, AA151253, H03753, N62604, AA262368, AA872321, AA528398, T31453, AA860343, H99866, AI355764, AA669437, AI457200, Z25006, AI784096, AA854278, H02858, AA610238, AA151252, AA812799, AA860538, R22379, N78372, AI753885, R21529, N30375, AI872973, AI799035, R53933, D62118, R26946, AI699830, R21637, R58459, C02929, R31678, R26721, R21879, AA722471, AI565876, AW293611, R31720, AI791789, AI791785, AI858806, AI536978, AI733374, AI733378, AA971532, AA971635, AA748757, U72935, U72936, U72937, U72938, U75653, U97103, AL109753, X83753, AL021328, U09820</p>

604	HAAAA25	874631	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1179 of SEQ ID NO:604, b is an integer of 15 to 1193, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:604, and where b is greater than or equal to a + 14.</p>	<p>AI680985, AA554513, AA877139, AA807892, AA514409, AI250782, AI214214, AA625531, AA593396, AI224033, AI016409, AI538453, AI281360, AI274110, N22772, AA722760, AI093842, AI249030, AI539329, AA550843, AI140319, AI828736, AA972406, AI688907, AI337957, AI339781, AI278350, W87861, AA975567, AA857219, AW167933, W87741, AI474024, AI538452, AI278811, AA464600, AA477850, AA527483, N31654, AA857170, H58025, AA235530, AI051600, AW384171, H24033, AW384172, R45453, AW023520, AW384760, AI989439, AA737307, AA923634, AW129709, T29737, AA568370, AA477744, AA641366, AA344094, AA298522, R11264, R43413, AI286350, F02958, AA908416, AA908367, AA703369, AW021464, R48004, AA304930, R11207, H57934, R43857, D19854, AA410662, AI003385, AR009803, K00535, J00120, D10493, M38057, L00058, X54629, K01906, X00198, K02276, M88115, V00568, M88116, M22728, X00247, X97040, X13232, Y00396, Z68501, K01904, E01841, L00039, X01023, X00197, M15078, X95367, M25762, U37688, A76272, M19724, X66258, U62109, X53248, AF076523, M13930, I24429, I24433</p>
605	HHEIW79	874632	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 424 of SEQ ID NO:605, b is an integer of 15 to 438, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:605, and where b is greater than or equal to a + 14.</p>	
606	HNGGK17	874635	<p>Preferably excluded from the</p>	<p>AI738940, AI823886, AI738657, AI922948,</p>

607	HCRQG35	874636	<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2660 of SEQ ID NO:606, b is an integer of 15 to 2674, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:606, and where b is greater than or equal to a + 14.</p>	<p>AW151581, AW149592, AI589830, AI589257, AI925870, AI954062, AI567725, AI583988, AI092891, AI813322, AI888900, AI144269, AI934468, AI201811, AW385059, AA010762, AA402611, AI377794, AA313622, AA885094, AA406315, AA411291, AI809416, AI200547, AI694616, AI311372, AI359746, AI284191, AI446577, AA250735, AI359731, AA421634, AI141252, W04357, AA459305, AI344678, AA905976, AA011123, AI916640, AI985038, AI693949, AA040561, AA741284, AA459536, AI751888, AA934389, AI910848, AI378236, AA410941, AI621273, AI274157, AI652270, AA622327, AI367816, AI216339, T54296, AA131112, AA402667, AI347253, AI274675, W96147, AA601964, W96281, AA058886, AI751889, AI884899, T32260, AW050753, AW016844, R83684, AW004614, AA100722, AA335522, AI283677, AA077166, AA232900, AI473399, AA340606, T54403, AI205557, AA045493, N33747, AI365391, AA353120, AA503782, N74265, AA131084, AA501834, AI383529, AI383218, C05771, T16555, AA601954, AA410741, AA293312, AI383672, AA232901, AA235598, AA291831, AA443910, AW376496, AA988530, H21820, AA994695, AA477067, AA077245, AI266246, AW304069, AF068229, AF046889, AF046783, AL049952, AC004876, AI740748, AL110389, AA811379, AA782486, WI9409, AA878648, N90129, W16730, AW102682, AI051040, AA805166, AI868693</p>
			<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1595 of SEQ ID NO:607, b is an integer of 15 to 1609, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	



608	HSODQ11	874638	<p>NO:607, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 906 of SEQ ID NO:608, b is an integer of 15 to 920, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:608, and where b is greater than or equal to a + 14.</p>	<p>AI806674, AI336314, AW117211, AA854185, AW206748, AA777170, AA862948, AA618065, E17301, AB024568, AB007917, AF060178, D88811, E17300</p>
609	HWLMR54	874639	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 269 of SEQ ID NO:609, b is an integer of 15 to 283, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:609, and where b is greater than or equal to a + 14.</p>	<p>AA971969, AI768790, AW134542, AI493522, AI681577, AI952974, AI559404, AI953261, AW390824, AL042965, AI142137, AI142139, AL119483, AL134538, AL134920, AL134531, AL134533, AL042896, AL119497, AR060234, AB026436</p>
610	HWLNI19	874640	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 484 of SEQ ID NO:610, b is an integer of 15 to 498, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	<p>R63925, AA809424, AL134524, AL045327, AL134110, AL047163, AL042898, AL045328, AL037295, AL038651, AL038838, AL037343, AI547295, AL038983, AI142134, D29033, AL037727, AL037436, AL037335, AL037323, AI318479, AL135012, AL037443, AL038532, AL038761, AL038822, AL037435, U46344, AL040472, AL043941, AL039432, AL045753, AL044125, AL038878, AL043923, AL043814, AL047012, AL041238, AL044186, AL040617, AL043845, AL041347, AL040193,</p>

			NO:610, and where b is greater than or equal to a + 14.	AL040444, AL040463, AL047170, AL044037, AL041635, AL040294, AL044064, AL041459, AL041577, AL044162, AL042135, AL047219, AL040625, AL045684, AL041752, AL046850, AL040768, AL045671, AL046994, AL046914, AL048714, AL040052, AL043496, AL043538, AL040621, AL040464, AL040510, AL043467, AL043677, AL040839, AL043492, AL041602, AL044074, AL041730, AL041523, AL043627, AL041374, AL043848, AL043570, AL047183, AL045494, AL042523, AL048657, AL046442, AL041324, AL049018, AL041133, AL039316, AL041098, AL040322, AL046392, AL040119, AL044272, AL044258, AL041168, AL041163, AL038040, AL041159, AL045817, AL045920, AL040148, AL079852, AL047057, AL040458, AL044187, AL041296, AL038041, AL041358, AL041292, AL040571, AL045990, AL044274, AL039338, AF176555, AR066494, AJ238010, A93923, D17247, A93916, AR064707, A93931, A85203, AR023813
611	HFPHT42	874642	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1055 of SEQ ID NO:611, b is an integer of 15 to 1069, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:611, and where b is greater than or equal to a + 14.	AI956173, AI807369, AI589822, AI571799, AI890926, AA028956, AA847313, AA709374, AA054754, AA029099, AI914642, R40748, H62853, N93504, R42692, AA027847, R38295, AI023016, AA872259, R42691, AF043293, AA026086, AI559787, AI474599, W21316, AA027880, AA053285, AW383148, AW383265, AW383202, AW362198, D59275, C14331, D80164, D80166, C15076, C14429, D81030, D59859, D59467, D51423, D80195, D80227, D59502, C14389, D80038, D58283, D80024, D80022, D59787, D80253, D59619, D80210, D51799, D80391, D80240, D80043, D80269, D80378, D57483, D80212, D50979, D80193, D80196, D80188, D80219, D59927, D80366, D59889, D50995, D59610, D51060, D80045, D80241, AA305409, T03269, AW178893, C75259, C14014,

	AA305578, AW177440, D51022, AW179328, D59695, D81026, AW378532, D80134, C14407, AI557751, D80522, D51250, D52291, AW178775, AW352158, D80268, F13647, D80251, AW369651, AA514188, D58253, D80248, D80949, AW178762, D80168, C14298, AI910186, C14227, D80064, AI905856, D51079, AW177501, AW177511, D81111, AA514186, D80133, AW360811, AW352117, Z21582, C05695, AW378540, AW176467, AW375405, AW377671, AW366296, AW360844, AW360817, D80132, AW375406, AW378534, AW179332, AW377672, AW179023, AW178905, D80302, D51097, AA285331, AW177505, D51103, AW352171, D80439, AW377676, AW178906, AW352170, AW177731, AW360834, AW178907, AW179019, AW179024, D59373, D80247, AW179020, AW360841, AW178909, AW177456, AW179329, AW178980, AW177733, AW378528, AW178908, AW178754, AW179018, AW179220, AW352174, AA809122, AW179004, AW179012, T11417, AW178914, AW378525, C06015, D80157, H62973, AW177722, AW177728, AW367967, AW179009, D51759, AW178774, AW178911, AW378543, D80014, AW352163, D80258, AW178983, AW352120, D58246, D59503, AI557774, AW178781, T48593, T03116, D59627, AI535961, D45260, D58101, C14344, AW177723, D59653, T02974, AW177508, AI535850, C14975, AW378539, AW367950, AW378533, H67854, C03092, H67866, AI525923, D59317, AI535686, AW177734, D51213, AW177497, AW178986, AI525917, D45273, C14973, N66429, D51221, D59551, D59474, D60214, AF035279, I33392, I33391, U31628, I33393, I33394, A84916, A62298, A62300, AJ132110, Y17188, AR018138, A25909, X67155, D26022, A67220, D89785, A78862, D34614, X82626, D88547, AF058696, AR008278, I82448, AB028859, AR025207, AR016808, A82595, X68127, Y12724, AB012117,

612	HLWCT94	874644	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 885 of SEQ ID NO:612, b is an integer of 15 to 899, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:612, and where b is greater than or equal to a + 14.</p>	<p>AR060385, A94995, A30438, AB002449, A85396, AR066482, A44171, X93549, A85477, I19525, A86792, AR008443, U87250, I50132, I50126, I50128, I50133, X64588, AR066488, AR016514, Y17187, AR060138, A45456, A26615, AR052274, Y09669, AR016691, AR016690, U46128, A43192, A43190, AR038669, AR066487, AR066490, I14842, AR054175, D88507, I18367, AR008277, AR008281, Z82022, D50010, AF135125, I79511, U79457, A63261, AR008408, AR062872, A70867, AB033111, D13509, A64136, A68321, AR060133, AR064240, U87247, AR060382, AF123263, AR032065, X93535, AR008382</p>
613	HWMBL25	874645	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 518 of SEQ ID NO:613, b is an integer of 15 to 532, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:613, and where b is greater than</p>	<p>AA478655, AA281301, AW195482, AT741900</p> <p>AA948091, AI453828, AI052644, R82937, H90431, R08446, AA886615, AA522578, J02960, M15169, X04827, X94608, Z86037, A65720, J03024, Y00106, X17607, L39264, AF000134, AF192345</p>

614	HWLOU23	874646	or equal to $a + 14$ . Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of $a-b$ , where $a$ is any integer between 1 to 497 of SEQ ID NO:614, $b$ is an integer of 15 to 511, where both $a$ and $b$ correspond to the positions of nucleotide residues shown in SEQ ID NO:614, and where $b$ is greater than or equal to $a + 14$ .	R25818
615	HWLOZ82	874650	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of $a-b$ , where $a$ is any integer between 1 to 491 of SEQ ID NO:615, $b$ is an integer of 15 to 505, where both $a$ and $b$ correspond to the positions of nucleotide residues shown in SEQ ID NO:615, and where $b$ is greater than or equal to $a + 14$ .	AW081540, AI479037, AW072272, AW117189
616	HWMBF50	874651	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of $a-b$ , where $a$ is any integer between 1 to 764 of SEQ ID NO:616, $b$ is an integer of 15 to 778, where both $a$ and $b$ correspond to the positions of nucleotide residues shown in SEQ ID NO:616, and where $b$ is greater than	AI245986, AA515492, AI673581, AC004080

617	HLYAZ23	874652	<p>or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 736 of SEQ ID NO:617, b is an integer of 15 to 750, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:617, and where b is greater than or equal to <math>a + 14</math>.</p>	<p>AA868475, AW276441, AA483003, AW023737, H92076, AA603869, R47433, H92126, AL022329</p>
618	HWLNL53	874653	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 437 of SEQ ID NO:618, b is an integer of 15 to 451, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:618, and where b is greater than or equal to <math>a + 14</math>.</p>	<p>AI057197, AI868634, AI968927, AI969377, N21608, AI365444, AI792468, AI734237, W25410, AI284326, AA430371, AI111175, AA421352, AI989368, AW183729, AI864157, AI014596, AW263212, AW028627, AI340066, AI819819, AI821683, AI821592, Z22333, Z22341</p>
619	HWLOZ25	874654	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1066 of SEQ ID NO:619, b is an integer of 15 to 1080, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:619, and where b is greater than</p>	<p>AI300570, AA481010, AI741320, AW270128, AI923117, AA760756, AI700414, AI925690, AA931348, AI373110, AA410291, AI275438, AI806701, AI807284, AA410330, AA702457, AA629745, AA703535, AI698191, AI150957, AW085055, AA553435, AW264870, AW264869, AA805375, AI860479</p>

620	HWMBV2 7	874655	or equal to $a + 14$ . Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of $a-b$ , where $a$ is any integer between 1 to 809 of SEQ ID NO:620, $b$ is an integer of 15 to 823, where both $a$ and $b$ correspond to the positions of nucleotide residues shown in SEQ ID NO:620, and where $b$ is greater than or equal to $a + 14$ .	AI248764, AW239443
621	HCRQH42	874656	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of $a-b$ , where $a$ is any integer between 1 to 706 of SEQ ID NO:621, $b$ is an integer of 15 to 720, where both $a$ and $b$ correspond to the positions of nucleotide residues shown in SEQ ID NO:621, and where $b$ is greater than or equal to $a + 14$ .	AW243038, AI084420, AC006008, AC005998
622	HWLOR14	874657	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of $a-b$ , where $a$ is any integer between 1 to 318 of SEQ ID NO:622, $b$ is an integer of 15 to 332, where both $a$ and $b$ correspond to the positions of nucleotide residues shown in SEQ ID NO:622, and where $b$ is greater than or equal to $a + 14$ .	AI339915, N57314, N32216, AI206520, AI681296, AW025016, C21215, AI582927, AI640316

623	HWMBB0 3	874658	or equal to $a + 14$ . Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of $a-b$ , where $a$ is any integer between 1 to 496 of SEQ ID NO:623, $b$ is an integer of 15 to 510, where both $a$ and $b$ correspond to the positions of nucleotide residues shown in SEQ ID NO:623, and where $b$ is greater than or equal to $a + 14$ .	H80552
624	HWLOW5 7	874659	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of $a-b$ , where $a$ is any integer between 1 to 639 of SEQ ID NO:624, $b$ is an integer of 15 to 653, where both $a$ and $b$ correspond to the positions of nucleotide residues shown in SEQ ID NO:624, and where $b$ is greater than or equal to $a + 14$ .	AA916992, AA494070
625	HWLOO77	874660	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of $a-b$ , where $a$ is any integer between 1 to 407 of SEQ ID NO:625, $b$ is an integer of 15 to 421, where both $a$ and $b$ correspond to the positions of nucleotide residues shown in SEQ ID NO:625, and where $b$ is greater than	AI203411



626	HWLOZ54	874662	<p>or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 486 of SEQ ID NO:626, <math>b</math> is an integer of 15 to 500, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:626, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	AA743433, AA813913, AA441931, AW305281, H11884
627	HWLMOI 9	874665	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 531 of SEQ ID NO:627, <math>b</math> is an integer of 15 to 545, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:627, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	R63068, AA699972, AF139786, R63109, AI969279, AL119324, AL119457, AW392670, U46351, U46349, U46350, AL119418, AL119443, AL042544, U46347, Z99396, AL119399, AL119319, AL119341, AL134902, AW372827, AW363220, AW384394, AL119391, AL037205, AL119484, AL119483, AL119464, U46341, AL119355, AL119401, AL119439, AL119363, AL119444, AL119497, AL119522, AL134531, AI142131, U46346, AL134525, AL134536, U46345, AL119335, AL043019, AL134538, AL119396, AL119496, AL042450, AL043029, AL042433, AL042542, AL042614, AL043003, AL042975, AL042984, AL043033, AL042965, AL042551, AF075009, AC004924, AB019440, AC007275, AR066494, AR060234, AB026436, A81671, AR054110, AR069079, AR043113
628	HWLMA6 8	874667	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 665 of SEQ ID NO:628, <math>b</math> is an integer of</p>	AW003119, AI090979, W69114, N29472, AA424883, AI522230, H82475, AA887087, AI744558, AA887101, AC005876

629	HWLNH87	874670	<p>15 to 679, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:628, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 891 of SEQ ID NO:629, b is an integer of 15 to 905, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:629, and where b is greater than or equal to a + 14.</p>	AI355520	
630	HOOHE79	874671	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 786 of SEQ ID NO:630, b is an integer of 15 to 800, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:630, and where b is greater than or equal to a + 14.</p>	<p>AI936089, AA905056, AI005349, AI051256, AA464408, AI097653, AA514868, AI767261, AA649112, AA455524, AA977858, AW235953, AI823386, AA737089, AL042898, U46344, AL046273, AL045891, AL045921, AI547258</p>	
631	HWLOJ08	874672	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 364 of SEQ ID NO:631, b is an integer of</p>	<p>T49824, AA063445, AI200727, AI992221, AI799324, AI362905, AI738764, AI367317, AI000424, HI6251, AW137183, AI375561, T49823, AW020216, Z99396, AW392670, AI474064, U46349, AL119319, AL119522, AW372827, AL119443, AL119483, U46351, AL119484, U46350, AL119391, AW384394, AL119439, AW363220, AL036418, AL038837, AL119457, AL119497,</p>	

632	HBCBF08	874673	<p>15 to 378, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:631, and where b is greater than or equal to a + 14.</p>	AL119324, AI142137, U46347, AL037051, AL036725, AA631969, AL119335, AL119444, AL119418, AL119363, AL037205, AL119401, U46346, AL119355, AL042614, AL134531, AI142139, U46341, AL119341, AL119396, AL043019, AL134524, AL036858, AL134525, AL039074, AL119496, AL036924, AL134528, AL134530, AL134519, AL119399, U46345, AL134518, AL134538, AL134526, AL042544, AL042896, AL042984, AL042965, AL042975, AL042542, AL037085, AL043029, AL042450, AL043003, AL039564, AL038509, AL039085, AL042551, AL039156, AL039108, AL039109, AL039128, AL037094, AL036268, AL037526, AL036196, AL036190, AL037082, AL037639, AL119464, AL038520, AL036767, AL037077, AL036998, AL038851, AL036733, AL037615, AR060234, AR066494, A81671, AR023813, AR064707, AB026436, AR054110, AR069079
633	HWHGZ23	874675	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 588 of SEQ ID NO:632, b is an integer of 15 to 602, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:632, and where b is greater than or equal to a + 14.</p>	U82695, AF151107, AF151108, AL049866
633	HWHGZ23	874675	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 655 of</p>	AA622392, AI215628, AI346006, AW268901, AW192528, AA931650, AA627385, AW087522, AI351272, AI310053, AA548906, AA781491, AI868907, AA512893, D45784

634	HWLOP85	874678	SEQ ID NO:633, b is an integer of 15 to 669, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:633, and where b is greater than or equal to a + 14.	
			Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 391 of SEQ ID NO:634, b is an integer of 15 to 405, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:634, and where b is greater than or equal to a + 14.	
635	HUSGX66	874679	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1315 of SEQ ID NO:635, b is an integer of 15 to 1329, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:635, and where b is greater than or equal to a + 14.	AA455712, AI811577, AA455657, AI139121, AI275409, N80080, AI927568, AI927562, AI139471, AA160473, AI587600, N59184, AI718928, N39140, AA723097, AI719983, AI335776, N78795, AA732097, W05057, R39073, W07223, AI864812, AA832398, N74667, N75923, N46550, AL119453, D19825, H89600, U66561, AL021918, AL031118, AA830689
636	HCRQM95	874680	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 426 of	AI887957, AI377535, AI803412, AI365236, AI916520, AI420581, AI216221, AI167532

637	HPWAI57	874682	SEQ ID NO:636, b is an integer of 15 to 440, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:636, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1202 of SEQ ID NO:637, b is an integer of 15 to 1216, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:637, and where b is greater than or equal to a + 14.	A87678, A87679	
638	HWLOQ35	874683	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 543 of SEQ ID NO:638, b is an integer of 15 to 557, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:638, and where b is greater than or equal to a + 14.	AW006294, AA744520, AI651714, AI263342, AI868001, AA713976, AI950571, AA253393, AA236977	
639	HE2EA79	874684	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1255 of	AI744509, AI471561, AW104671, AI743782, N56950, AI358155, AA129551, AI493213, AW263313, AW375671, N22107, H46617, AA136565, H39587, AI014857, AW371735, AA687548, H26480, AI078667, F00545, AW023186, AA843086, AA939320, AA425438, AW264264, D25988, AW087311, AA526886, AI096403,	

<p>SEQ ID NO:639, b is an integer of 15 to 1269, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:639, and where b is greater than or equal to a + 14.</p>	<p>H40017, H88197, AI096401, AA503479, AA501971, H26319, H83564, AA322124, AA372778, AW375657, AI686136, N75489, AI476089, AI088717, AA581177, AI003734, AI460390, AA720732, AI937850, AA381762, AI184354, AA665293, AA655002, AW440935, AA074130, AA649553, H70615, AA968509, AI348611, N84245, AW242020, AA843450, AI357551, M18217, AF051561, AP000563, AC005342, U47924, AF064861, AC005057, AC006111, AL109758, AC007488, AP000133, AP000211, AL022721, AC007536, AC006251, AC004821, AL035072, AC009516, AC002558, AC007216, AF107885, AC006539, AC005944, AC005755, AC004967, AC004236, AC005210, AL021808, AF001552, AC000066, AC010582, U96629, AC006449, Z85986, AC004878, AC005330, AC002540, AP000553, AC002994, AC005740, U95742, AC002563, AC002544, AC000052, AC005378, AC011311, AL121653, AC006205, AF045555, AP000692, AC004383, AJ010770, AL008635, AC001231, AC004019, AP000493, AC006130, AC005399, AP000505, AC004263, AL049758, AC002425, AL133445, AC005372, AL109827, AC005037, AC006480, AC006120, AL096791, AL031431, AC005411, AL049759, AC005696, AP000961, AC004386, AC003029, AC005821, Z84469, AC005874, AF134471, AC005225, U95740, AL049872, AC006001, Y14768, AC002350, AP000510, AC002041, U91326, AC000026, AC004859, AC007066, AC005233, AC005226, AL034548, AC009405, AL049760, AC005261, AC005800, AC005081, AL021397, AC003041, AL109984, AJ003147, AL034451, AL049709, AF053356, AP001037, AL132777, Z84480, AC007666, AC006285, AC007050, AC002377, AC002070, AF196969, AC005274, AC006261, AC005531, AC002565, AC005594, AL135783, AC002542,</p>
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640	HWLOI43	874688	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 677 of SEQ ID NO:640, b is an integer of 15 to 691, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:640, and where b is greater than or equal to a + 14.</p>	<p>AC005288, AP000552, AP000152, AL049694, AF196779, AL035699, AC002347 AI434204, AI825202, AW263495</p>
641	HCRQM44	874689	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 590 of SEQ ID NO:641, b is an integer of 15 to 604, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:641, and where b is greater than or equal to a + 14.</p>	<p>AI655499, AI655518, AA229021, AA935461, AI934387, AI792543, AI053710</p>
642	HCRMZ25	874695	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 947 of SEQ ID NO:642, b is an integer of 15 to 961, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	<p>AL037381, AA921743, AA813075, AW294816, AA709202, AC009509</p>

643	HCROB95	874696	NO:642, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 411 of SEQ ID NO:643, b is an integer of 15 to 425, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:643, and where b is greater than or equal to a + 14.	N72329, AA459727, AW392671, AL049766
644	HWLXN82	874697	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 405 of SEQ ID NO:644, b is an integer of 15 to 419, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:644, and where b is greater than or equal to a + 14.	AW015211, AI264462, AI285215, T05692
645	HWLXW0 8	874699	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 641 of SEQ ID NO:645, b is an integer of 15 to 655, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID	AI767447, AI766077, AI735760, AA993877, AI825978, AI917242, AI016453, AI126039, AW022857, AA127250, AW139495, R60691, AW021848, AI984586, AI242322, R39813, R24208, AI479579, AW196253, Z40634, AA127231, H10019, F03822, AA577386, AI382340, T61246, AA092616, AI868839, AI245091, AW372310, AA644511



646	HWLVR69	874700	<p>NO:645, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 444 of SEQ ID NO:646, b is an integer of 15 to 458, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:646, and where b is greater than or equal to a + 14.</p>	
647	H2CBD62	874701	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 271 of SEQ ID NO:647, b is an integer of 15 to 285, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:647, and where b is greater than or equal to a + 14.</p>	<p>AA307263, AW085751, AI267285, AA524604, AA372958, AA174108, AI889236, AL079553, AI567976, AA484321, AA210951, AI696455, AA676462, AI754926, AA513196, H65856, T05648, AA669458, H94719, AI199578, AA845690, T73227, AI000381, AI590404, AL110280, AF109907, AL034430, AL033543, AC001228, AL034548, Z82244, AC004615, U80017, Z94161, AC007093, Z68287, Z98048, AL031295, AF060911, AP000695, AP000696, AL121652, AD000092, U91325, AC005082, Z81365, AC005225, AC004707, AC005231, AC004150, AC002395, AL031005, AC002117, AC007225, U47924, AC005060, AL034417, AL133163, AC005593, AL031259, AC005412, AL008720, AP000692, Z82215, AC006285, AC007065, AC004797, AB014079, AC006139, AL031255, AC005206, AL049743, AL035593, AC005667, AP000514, Z97876, Z93023, AL035420, Z98946, AC006120, AL022170, AC006029, AF196779, AC005071, AC007371, AP000350, AC008055, AC006515, AC000111, Z93241, AL021392, AL121657, AL109628, AC005031, AL031775, AL049745, AC005828, AC003108, AL133448,</p>

648	HMSAQ57	874702	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1858 of SEQ ID NO:648, b is an integer of 15 to 1872, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:648, and where b is greater than or equal to a + 14.</p>	<p>AC005666, AF118885, AL034555, AC005048, AL133243, AC005180, AF038458, AL022099, AC005694, AP000359, AL078581, Z95113, AC006011, AC005553, AC005529, Z93930, AF205588</p> <p>AW451074, AW130600, AI862553, AI051950, AW299675, AW139740, AW073410, AI764978, AI092240, AI654439, AI498686, AI147089, AI823941, AI375756, AI082198, AI3111457, R16260, AA459894, AW304679, H12109, AI985201, AA860539, W03774, AA744884, AA704679, AI081657, AA032035, R55508, AW338881, AI700853, Z45437, T75489, R55509, AI768483, R44809, R16259, Z41144, H12110, T75528, AI373046, R19144, AI393085, AA682663, AI765743, AI915400, F04608, F17928, AI656550, AI655676, F31453, N79255, AI913700, AI345369, AI345363, AI370066, T66718, T66719</p> <p>AA280627, W65462, W65463, AA569964, AI474861</p>
649	HCR0D17	874703	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 826 of SEQ ID NO:649, b is an integer of 15 to 840, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:649, and where b is greater than or equal to a + 14.</p>	
650	H2CBN90	874704	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 809 of SEQ ID NO:650, b is an integer of 15 to 823, where both a and b</p>	<p>AA307843, AA313349, W27338, AA333675, T24466, AB005549</p>

651	H2CBP17	874707	correspond to the positions of nucleotide residues shown in SEQ ID NO:650, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 527 of SEQ ID NO:651, b is an integer of 15 to 541, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:651, and where b is greater than or equal to a + 14.	AA307703, AI167601, AI868476, ALI34976, AF071592, AJ271784, AF179308, AL021786, D12646
652	HTTDU01	874708	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1641 of SEQ ID NO:652, b is an integer of 15 to 1655, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:652, and where b is greater than or equal to a + 14.	AW105143, AA307599, AI971445, AI017401, N53419, AI041077, AI864277, AI494173, N53432, AA580971, AA196917, AI613044, AA370694
653	H2CBH38	874709	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1146 of SEQ ID NO:653, b is an integer of 15 to 1160, where both a and b	AW292791, AI741397, AA307497, AA425155, W68586, AI702582, AA953425, AA767708, W68587, AA429408, AA721268, AA504241

654	H2CBX48	874710	correspond to the positions of nucleotide residues shown in SEQ ID NO:653, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 822 of SEQ ID NO:654, b is an integer of 15 to 836, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:654, and where b is greater than or equal to a + 14.	AA313774, N87550, AI659717, AB033023
655	H2CBT32	874711	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1174 of SEQ ID NO:655, b is an integer of 15 to 1188, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:655, and where b is greater than or equal to a + 14.	AW117351, AA984205, W73590, AA313565, C06040, AW016815, AI201605, AI927839, W27788, W28846, AW050936, W20474, AA563590, AI291970, C00092, AA193611, AA037235
656	HAGBH67	874713	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1118 of SEQ ID NO:656, b is an integer of 15 to 1132, where both a and b	AW054855, AA781176, AI301923, AI003840, AA293873, AI1139637, AI209150, AA781378, AA699734, AI499705, AI422131, AA740326, AI343622, AA406215, AA993480, AI918065, AI423416, AI301318, AI078370, T70541, AW452361, AA405360, AA045732, AA416618, AI271992, AA743041, AI024173, AA861395, AI202580, AI028291, AA045733, AI023353, AA416600,

657	HE2LX05	874714	<p>correspond to the positions of nucleotide residues shown in SEQ ID NO:656, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 552 of SEQ ID NO:657, b is an integer of 15 to 566, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:657, and where b is greater than or equal to a + 14.</p>	AA677648, AA430066, H26418, AI247927, AA669613, T88915, AW296477, AA412195, AA416994, AA398297, T70810, AA435656, AI991785, H46640, H26344, AI208039, T85978, R70388, AI350557, AI991938, AA806905, AI424484, AI916494, AI808428, AI000979, AC004231, X14487 AI374943, AL038761, AL040553, AL039432, AL037295, AL037443, AL037343, AL037335, AL042096, AL040238, AL134524, AL043941, AL079852, AL045328, AL038838, AL038983, AL047012, AL047170, AL040463, AL037727, AL047219, AL044162, AI142134, AL040621, AL043538, AL043496, AL040464, AL041238, AL038532, AL040576, AL041324, AL038822, AL040193, AL044186, AL040617, AL041098, AL041096, AL040625, AL047183, AL044037, AL042898, AL043923, AL043814, AL040510, AL045684, AL043467, AL043845, AL041635, AL041752, AL041133, AL040294, AL041358, AL043677, AL044064, AL041296, AL040839, AL041459, AL041577, AL040119, AL040322, AL041163, AL043492, AL041602, AL041346, AL045753, AL037436, AL044074, AL040052, AL040472, AL046850, AL040768, AL046442, AL041730, AL041523, AL043627, AL041374, AL046994, AL043848, AL046914, AL043570, AL042135, AL047057, AL041197, AL041086, AL040075, AL040444, AL039316, AL041955, AL045671, AL046392, AL044272, AL041292, AL041159, AL040370, AL044258, AL045920, AL041233, AL040148, AL041142, AL040458, AL049018, AL044187, AL041168, AL037435, AL040332, AL040155, AL040529, AL045990, AL046330, AL044199, AL040149, AL047036, AL040571, AL045989, AL040128, AL040745, AL041277, AL044274, AL040342, AL079878,
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AL041186, AL039643, AL040285, AL040414, AL040091, AL041131, AL044165, AL041051, AL040090, AL039744, AL040168, AL043775, AL041227, AL040253, AL041246, Z30131, AL045857, AL040082, AL041347, AL040329, AL039338, AL045211, AL041140, AI535639, AL045327, AL045817, AL047037, AL040263, AL043440, AL044125, AL045725, AL047163, AL040255, AL037341, AL039915, AL043612, AL046097, AL046360, AI525306, AL041210, AL041278, R28735, AL037323, AI557262, AL044201, AL045994, AL049069, AL046327, R29177, AA585476, AI526194, AL039360, AA174170, AL134110, AI547039, AL046150, AI540967, AI541535, AI541509, AI546999, AL043444, AL037279, AI541510, AI546899, AL044529, AI557787, Z28355, AL043537, AI557799, AI546891, AI547295, AI541013, AI541390, AI536138, AI526144, AL046147, AI557807, AI546855, AI541307, AI541534, AL080031, AJ239433, AI546828, AI525316, AI525321, AI557796, AL045784, AL042712, D61254, AI557082, AI541205, AI546945, AA585439, AL038878, AI535813, AI526184, AI525328, AA283326, AL038651, R29218, AI535660, AI557802, AI547006, D57186, D29033, R28895, AI557238, AI557731, R45895, AL045340, AI526125, AL041344, R28967, R28965, U46344, R28892, T10982, AI541508, AI557808, AI547048, AI557734, AA585329, AL048677, I08395, I08396, AR038762, AR064707, AJ230935, AJ230902, AR038855, AJ230951, AR051652, AJ231009, AR051651, AJ244007, I08389, AJ238010, AR008429, X07299, A58524, X81969, A43189, A43188, A58523, A20702, AJ244003, AJ244004, AF082186, A20700, A98420, A98423, A98432, A98436, A98417, A98427, AR066494, AR062872, I19525, AR062873, A81878,				
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658	HAHCU44	874715	Preferably excluded from the	<p>A98767, A25909, AR062871, A93963, A93964, A86792, A64973, A85395, A85476, A84772, A84776, A84773, A84775, A84774, E12584, AR067731, AR037157, AR054109, AR067732, A58522, A91750, AJ230867, Y09813, I18302, Z32836, X83865, I18895, Y16359, AR035975, AR035977, AR009151, A22738, A77094, A77095, I62368, A60212, A60209, A60210, A60211, D78345, A93016, E13740, A68112, A68104, I63120, AJ231028, E03627, A18050, A23334, A75888, I70384, A60111, A23633, AR007512, A35536, A35537, AR009152, A02135, A02136, A04663, A04664, A02712, A95051, A18053, A11245, AR017907, I06859, I48927, I00682, A11623, A11624, E00609, AR043601, A11178, E01007, I13349, A10361, I15353, AJ230972, AJ244005, I84553, I84554, D13509, I03331, A02710, E12615, AR035193, E14304, A07700, A13392, A13393, AR031488, I13521, I52048, A27396, I25027, AR027100, I44531, I28266, I21869, I26929, I44515, I26928, I26930, I26927, I44516, E16678, A82653, E16636, M28262, I15718, A24783, A24782, I01995, A95117, I08051, I15717, E17098, A93923, I49890, A92133, A70872, A70040, A91965, D17247, AR035974, AR035976, AR035978, I60241, I60242, I44681, A90655, AF149828, AR031566, AJ230845, AR022273, D50010, A20699, E00696, E00697, E03813, I66482, I66485, I66483, I66484, I66498, I66497, I66496, AR038066, AR027099, I66487, I66486, I05558, A70869, A93916, AR051957, I66495, I66494, AB025273, D13316, A93931, A22734, AR051864, AR051865, I36244, A06631, I66481, A83642, A83643, I66488, I66489, I66490, I66491, I66492, I66493, A83151, S60422, AJ231011, AR063812, AL133053, AL133049, A05993, A05975, A05973, A05991, A05995</p> <p>AA838833, AI951830, AI983935, AW083500.</p>
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659	HFRAM50	874717	<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1164 of SEQ ID NO:658, b is an integer of 15 to 1178, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:658, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 910 of SEQ ID NO:659, b is an integer of 15 to 924, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:659, and where b is greater than or equal to a + 14.</p>	<p>AA505859, W37679, W37680, AA372012, AI033632, W38021, AA583310, AW237259, AA724242, AA321659, W20140, AI445781, AI335223, AI792549, AA827028, AL109756, Z77249, AC004982, AC004996, AC005342, Z81370, AL031584, AL049569, Z97353</p> <p>D20728, AA244320, AI740884, AW178896, Z35731, AP000526, AP000525, AC006561, U49973, AC006965, AC006566, U70984, Z82200, Z82206, AC006077, AL049781, AC006487, AL079305, AL132985, AL136504</p>
660	HAJBD60	874718	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 799 of SEQ ID NO:660, b is an integer of 15 to 813, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:660, and where b is greater than or equal to a + 14.</p>	<p>W22230, T74316, F12667, AA318357, R19418, AA356083</p>
661	HTPHK47	874719	Preferably excluded from the	<p>AW237653, AA991673, AI764967, AI920926,</p>



662	HAMGM2 7	874720	present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1704 of SEQ ID NO:661, b is an integer of 15 to 1718, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:661, and where b is greater than or equal to a + 14.	AI091466, AA934348, AI220342, AA993838, AA506184, AW204074, AA113281, AA214337, AI433064, AI381333, AI205720, AI683561, C01718, AA082796, AI270624, N66474, R58514, AA933806, AI537337, AI863530, AL049989, AF121857
663	HWLXA56	874723	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1100 of SEQ ID NO:662, b is an integer of 15 to 1114, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:662, and where b is greater than or equal to a + 14.	AA548621, AI732587, AA173525, AA307836, AI763187, AF094481
664	HBGMC86	874724	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 327 of SEQ ID NO:663, b is an integer of 15 to 341, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:663, and where b is greater than or equal to a + 14.	N73842

			present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 271 of SEQ ID NO:664, b is an integer of 15 to 285, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:664, and where b is greater than or equal to a + 14.		
665	HOSPA23	874725	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 617 of SEQ ID NO:665, b is an integer of 15 to 631, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:665, and where b is greater than or equal to a + 14.	N47382, R23996, AI633730, AI638247, AI753699, ALI33621, AJ010347, AJ010346	
666	HBAHC42	874726	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1515 of SEQ ID NO:666, b is an integer of 15 to 1529, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:666, and where b is greater than or equal to a + 14.	AI590204, AA888858, AI915839, AI623511, AA506691, AA598909, AA621684, D60400, AA694016, C15028, AA513161, AA635146, D60469, D62914, D50640	
667	HUSGQ45	874727	Preferably excluded from the	AI480121, AA649066, AI673083, AA393762,	

668	HBMXP34	874728	<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1006 of SEQ ID NO:667, b is an integer of 15 to 1020, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:667, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 796 of SEQ ID NO:668, b is an integer of 15 to 810, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:668, and where b is greater than or equal to a + 14.</p>	<p>AA862483, AW300415, AI205871, AI243338, AA805344, AI472932, AA708627, AI368938, AA877843, AA456841, R77915, AW139999, AI684582, AA764940, R78016, AW023585, AA209140</p> <p>AI792688, AI202262, AW439428, R30837, AI6933225</p>
669	HHEME74	874732	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2487 of SEQ ID NO:669, b is an integer of 15 to 2501, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:669, and where b is greater than or equal to a + 14.</p>	<p>AW274756, AW182379, AW051349, AA922068, W02396, AI693750, AA400751, AA059377, AI457629, AI269931, AA775695, AA310528, AA312213, AA194249, AA699614, AW028098, AA805247, AA505197, AA548104, AA948551, AA158267, AI038906, AI741887, AI032086, AW151955, AA193119, AI022731, AA234296, AA777005, AI571555, AA701969, AI375089, AI982583, W44357, AI797542, AI436645, N90821, AW172699, T26677, AI332630, W01662, N34645, AW043907, N67039, AI21679, AA284197, W40197, AI085767, AA766813, AA284198, N35501, AA512994, AI338224, AI367890, AA688264, AA731320, W45710, AA400669, AI291688,</p>

670	HCNDN66	874737	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 415 of SEQ ID NO:670, b is an integer of 15 to 429, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:670, and where b is greater than or equal to a + 14.</p>	<p>AW294908, AA604274, R82672, AA345093, H83598, AA702282, W68424, N72570, N34412, AA251019, AA284086, AI334727, H78499, N64397, H77362, AA810816, AA262986, AI700747, AA251120, AI382959, T26676, N48646, AI167208, AI472804, AA702898, AA354227, AA031990, AW366346, R11174, AI473124, R82730, R94344, AW182231, W01844, AA094055, T91181, H78402, AA010076, AA736883, R58001, Z41608, W19801, T18591, AA355137, AA347089, T79458, AA256155, N71636, C16696, R11175, D79173, AI193926, T99728, N75337, AI767506, AA714340, AA890568, AA491304, R13196, T99729, AI270066, AA806344, R28156, T90012, W68522, Z42074, R28155, AA091353, AA170845, T84690, AA058876, AA031989, N90004, R93023, AA248312, AA256212, AA585248, T79548, T25445, AC005156, AC000065</p>
671	H2CBI61	874741	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1468 of SEQ ID NO:671, b is an integer of</p>	<p>AI609152, AI818924, AI356291, AA401242, N48523, AA307559, AA130794, AI078381, AA130708, AA311805, AI198283, AI201085, AA446714, AI077572, AI694848, AW016425, AA190411, AA577072, AA102778, AA114156, AI671975, AI923123, AA215731, AA978209, AW025780, AA215665, AA446587, AI277223, Z24841, AA190801,</p>

672	HCQAE09	874744	<p>15 to 1482, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:671, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 593 of SEQ ID NO:672, b is an integer of 15 to 607, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:672, and where b is greater than or equal to a + 14.</p>	<p>F35734, AI904194, R44726, F26140, T16749, AA295023, AA761079, AI991909, AI581346, AI382586, AI919306, F00168, AI557129, AI884969, E15521, U70732</p> <p>N53604, H02495, AC005552, AC005029, AC004921</p>
673	HCNDP23	874745	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 456 of SEQ ID NO:673, b is an integer of 15 to 470, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:673, and where b is greater than or equal to a + 14.</p>	AA425598, AA425445
674	HCQBE66	874746	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1096 of SEQ ID NO:674, b is an integer of</p>	AI075904, R14809, H96672, T16569, AL009182

675	HCQAK59	874747	15 to 1110, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:674, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 236 of SEQ ID NO:675, b is an integer of 15 to 250, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:675, and where b is greater than or equal to a + 14.	AI392817, H50875, AI983401, AA468705, AI991177, AI310431, AI765153, AA602377, AI867382, H50876, R99562, AA776326, T25070, AF176114, L12141, X74938
676	HCQAR64	874748	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 678 of SEQ ID NO:676, b is an integer of 15 to 692, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:676, and where b is greater than or equal to a + 14.	
677	HWMAC4 8	874749	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 348 of SEQ ID NO:677, b is an integer of	Z99396, AL119355, AL036418, AL038837, AL037051, AL036725, AA631969, AW392670, AL039074, U46349, AL036924, AL036858, AW372827, AL038509, AW384394, AL039564, AL039085, AL039156, AL039108, AW363220, AL039109, AL039128, AL119497, AL119483, AL119457, AL119319, AL036190, AL119324, AL119443, AL037094,

678	HCQBE76	874750	<p>15 to 362, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:677, and where b is greater than or equal to a + 14.</p>	<p>AL037639, AL039659, AL119341, AL036196, AL119484, AL119363, AL119391, AL037526, U46350, AL119522, U46351, U46341, AL038531, AL036767, AL119335, AL037082, AL036238, AL119396, AL134536, AL119418, AL042909, AL119496, AL039625, AL039648, AL045337, AL036268, AL042984, AL038447, AL039386, U46347, AL037085, AL119444, U46346, AL039678, AL119401, AL039629, AL134902, AL037205, AL119439, AL039423, AL038520, AL039150, AL037077, AL036998, AL036733, AL042551, AL037615, AL038851, AL040992, AL134538, AL042614, AL042975, AL042965, AL134527, AL036719, AL119399, AL134525, AL042433, AI142131, U46345, AL037178, AL037027, AL119464, AL043033, AL043029, AI142134, AL036679, AL043019, AL042544, AL042450, AL043011, AL039410, AL042542, AL036191, AL036765, AL043003, AL037021, AL036774, AL036158, AL036886, AR066494, AR060234, A81671, AR023813, AR064707, AR069079, AR054110, AB026436</p>
679	HWLCA32	874751	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 320 of SEQ ID NO:678, b is an integer of 15 to 334, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:678, and where b is greater than or equal to a + 14.</p>	

680	HWLHH20	874752	nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 599 of SEQ ID NO:679, b is an integer of 15 to 613, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:679, and where b is greater than or equal to a + 14.	
681	HCQBI72	874753	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 386 of SEQ ID NO:680, b is an integer of 15 to 400, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:680, and where b is greater than or equal to a + 14.	AA541466, AW192480, AW393644, AW392419, AF151978, Z96810
682	HCQBH60	874754	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 571 of SEQ ID NO:681, b is an integer of 15 to 585, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:681, and where b is greater than or equal to a + 14.	AI567502, AI921463, AI570914, AI679795, AI623354, AI573055, AI583952, AW338193, AI249363, AI431423, AI460112, AA132183,



683	HHMMBI 7	874755	nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 596 of SEQ ID NO:682, b is an integer of 15 to 610, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:682, and where b is greater than or equal to a + 14.	AI453724, AI520713, AI682808, AI582940, AI634287, AI640689, AW193016, AI700372, D25704, AI245910, AI571582, AA149529, AA837986, AA592922, AW192250, AW360825, AW360800, AA053011, AI583942, AI114671, AA502754, E01630, M15042, M17303, M59709, M29540, I08156, AF113017
684	HCQCB28	874756	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 401 of SEQ ID NO:683, b is an integer of 15 to 415, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:683, and where b is greater than or equal to a + 14.	AI583942, AI734872, AI520713, AI749559, AA524877, AW192250, AI921463, AA132183, AI583952, AI640689, AA149529, AW338193, AI453724, AA053011, AI249363, AI567502, AI431423, AI571582, AI623354, AI570914, AW193016, AI679795, AI573055, AI682808, AI460112, D25704, AA837986, AA502754, M59709, E01630, M15042, M17303, M29540
685	HCQCC66	874757	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 639 of SEQ ID NO:684, b is an integer of 15 to 653, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:684, and where b is greater than or equal to a + 14.	AI857685, AI127950, AI498052, AI093116, AI937245, AA837396, AA931150, AA894527, AI077433, AA814942, AA729327, AA910659, AA836412, AA564324, AI623269, R16770, AA846844, AA932274, T89616, AI470094, AI208399, W19090, N79612, AI698941, AF001548
			Preferably excluded from the present invention are one or more polynucleotides comprising a	AL049651, AC006928, AL133371

686	HOELS72	874758	nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 305 of SEQ ID NO:685, b is an integer of 15 to 319, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:685, and where b is greater than or equal to a + 14.	AI374739	
687	HCQCB62	874759	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 267 of SEQ ID NO:686, b is an integer of 15 to 281, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:686, and where b is greater than or equal to a + 14.	AA299543	
688	HCQCC13	874760	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 164 of SEQ ID NO:687, b is an integer of 15 to 178, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:687, and where b is greater than or equal to a + 14.	AI970919, C20819	

689	HCQCF83	874763	nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 323 of SEQ ID NO:688, b is an integer of 15 to 337, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:688, and where b is greater than or equal to a + 14.	AA443394, AA993080, N39733, AA328123, N26638, AA446382, AA328400, AI357465, AI471723, AI367772, AI191860, D20715, AI567979, AI376199, AA569983
690	HCQAF27	874764	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1121 of SEQ ID NO:689, b is an integer of 15 to 1135, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:689, and where b is greater than or equal to a + 14.	T58797
691	HCQCJ56	874765	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 414 of SEQ ID NO:690, b is an integer of 15 to 428, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:690, and where b is greater than or equal to a + 14.	AI674974, AI217307, AA813576, AI824976, AA994749, AI244904, AI262935, AA020796, AA234517, AA443035, AW079079, AA463478,

			nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1273 of SEQ ID NO:691, b is an integer of 15 to 1287, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:691, and where b is greater than or equal to a + 14.	AA694400, AI005463, AA776532, R00437, R00438
692	HCQCD88	874766	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 337 of SEQ ID NO:692, b is an integer of 15 to 351, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:692, and where b is greater than or equal to a + 14.	AI242329, AI242439, AI097229, AA932068, AA516371, AW001485, AA523948, AW196074, AA555145, AI345471, AA814721, AI270039, AI679261, W48671, AI336503, AI590755, AW085350, AI798359, AI345608, T27702, AA853473, AW079334, AI559863, AW022494, AW020288, AW088560, AW022542, AA662117, AW020144, AI821062, AW104141, AW029457, AI309306, AA761557, AI866419, AA575874, AA653459, AI932739, AL048644, AL110373, N27632, AW081103, AA629977, AW191844, AI557808, AI589428, AI612885, AI345677, AW162189, AI630932, AW022636, AI640370, AW059713, AI289791, AA766618, AI340653, AW021717, AW083168, AW081383, AI539781, AI538850, AI500113, AI702343, AW020048, AW148882, AW191003, AL046021, AI539707, AL048499, AL110402, AA215584, AW021662, AI623302, AA219283, AA665612, AW020328, AW151979, AI784214, AI866691, AI801325, AI524654, AI225248, AW071377, AI362332, AI469516, AL046262, AW404239, AI431307, AA977351, AI421662, AI648494, N75779, AI431316, AI912496, AI273179, AI335476, AI633061, AI431238, AW055261, AI699175, AI821259, N25033, AI345562, AW082600, AI203903, AI312210, AL041924, AI340533, AI500662, AI309431, AW022102, AI345739, AW009066,

	AI348854, AI133029, AI312143, AI340511, AI624304, AI334895, AI687568, AI336495, AA587590, AA613255, AI344931, AW085786, AI340644, AI307507, AA420758, AI250627, AI251221, AI310920, AI571699, AI310927, AW265004, AI307503, AA088789, AI866820, AI886055, AI307578, AI336488, AI472536, AI360195, AI336565, AI677797, AW148303, AI932949, AI623736, AA514684, AI560545, AI379711, AI349186, AI334913, AI312432, AI310930, AI343131, AI537516, AI310592, AI307542, AI312271, AI915295, AI926593, AI439903, AI312333, AI583578, AI312963, AA928539, AI285417, AI340537, AW172723, AW151451, AI249946, AI244380, AI242736, AI285514, AI224373, AI866573, AW190297, AI446110, AI370322, AI440444, AI312431, AI624475, AI307459, AI343140, AI334920, AW161098, AI553669, AI345014, AI349971, AW079768, AI815232, AI805769, AI434242, AI636788, AW131994, AL049003, AI049856, AI500523, AL049053, AI312261, AA207067, AI925402, AI334930, AI343030, AI349805, AI609420, AI061180, AI887775, AI446124, AI307505, AI582932, AW189933, AI307549, AW238688, AI452857, AI872423, AI590043, AI284517, AI923989, AI310606, AI336585, AI334738, AI500706, AI491776, AI445237, AL042731, AC007360, AC005013, AL021193, AE000664, AC007298, S77771, AL137541, AL031346, AC002564, AL031274, AF162270, AC002538, AP000697, E12579, AP000083, AF003738, AF090940, L30117, AF095901, Z93784, AC007114, AC004383, AC003977, E12580, Z92543, AF206503, J05032, AL117440, AC000053, Z82206, AC002060, AP000344, AL050322, AC004554, AC002457, AC002540,

				AC007390, D83989, AR038854, A18777, AL096776, AP000020, AL033521, AC008067, AC005992, AR050959, AF003737, L19437, AF061795, AF151685, X93495, Z49258, AP000361, AP000458, U89335, AC005057, AC005091, AL035587, AC005048, Z94277, AC006017, AC008014, AC007172, AC006371, U66059, AF113689, AC002377, AC003042, A08907, AC005911, AF146191, A23630, AC002531, U96074, AF012536, AL122021, AJ131955, AF110417, A27171, AC002287, AL080245, AL033523, AP000130, AP000208, AP000247, AL031295, AL034376, AC018767, X97332, AF113019, A65340, U76419, AL137574, D38178, AB022159, U69730, AL031732, AC007748, Z99297, AL030998, AC005886, AC004837, AL020994, AC009113, AC004057, AC005296, AF042090, AC018769, E03348, AL022147, Y11587, AF215669, E03349, AR059958, AC006944, AL080150, AF098162, AP000250, AC004213, AC003005, U95739, AP000211, AP000133, AP000030, AC004974, AC010072, AC004686, AC009233, U67232, I48978, AC002464, AC005940, AL049553, AF141976, AC005353, X00861, AF150103, AF000145, AR036183, Z98036, U67211, AL136130, AC004111, AC004690, U77594, I22272, AF169154, Y08769, A41579, AL133070, X83544, AF076633, S59519, AL049377, AL122098, AB007812, AF205861, U62966, AL050129, AF044323, AL137273, X93328, AF085809, AL133565, J05277, Z30970, Y15724, AJ238093, AC006561, AC004989, AC005876, AL049742, AC002428, AC004062, AC005341, AC006479, AF109683, U08374, AC006205, AF179633, Z99289, Z82250, AC009286, AC005295, Z98049, A48221, AC005790, Y17327, AF060868, AF067790, AL079340, A41575, AR000496, AL133088, U39656, AL137536, AC004553, AF109155, AF090886, I30339, I30334, S53987, M64936, AC006203, AF139373, A48220, AC006344, AC006112, AL008735, AC005778,

693	HE8OJ09	874767	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1190 of SEQ ID NO:693, b is an integer of 15 to 1204, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:693, and where b is greater than or equal to a + 14.</p>	<p>AL034374            AW419048, AA100804, AA121287, AI911097, AA502311, AI075431, AW089948, AW132123, AA488316, AW083432, AI990554, AA100952, F28643, AA207032, AA741512, AA731380, AA731382, W79581, AI655521, AI655502, AI808218, AA731381, W79780, AI970106, AA251012, F37179, AW439007, AA329792, AW439035, AA730238, AI640142, AA262868, AW087255, AI559734, AA252138, AA242847, AC004087, U49385, AF086422</p>
694	HCQCR67	874768	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 269 of SEQ ID NO:694, b is an integer of 15 to 283, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:694, and where b is greater than or equal to a + 14.</p>	
695	HPHAA27	874769	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2719 of SEQ ID NO:695, b is an integer of 15 to 2733, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:695, and where b is greater than</p>	<p>AA081793, AI123953, AA227619, AW183759, AA860996, AA082138, AI306487, AA693989, AI308192, AI632845, AI334618, AA313548, AI913841, AA102571, R59474, T09476, AI167448, Z44227, R12103, AI282042, H02687, AA256840, AA256799, R36857, R16314, AI378960, AA226814, H98566, AA046342, AL046364, AA577395, AI590381, AA883418, AA094506, AI031691, AA749079, U61107</p>

696	HCROV23	874772	<p>or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 561 of SEQ ID NO:696, <math>b</math> is an integer of 15 to 575, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:696, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	<p>Z99396, AW392670, AL119457, AL119324, AW372827, AW384394, AL119497, AW363220, AL119319, U46351, U46350, AL119341, AL036418, AL038837, AL119484, AL119391, AL119443, AL119522, AI142131, AL037051, AL036725, AL119355, AL119483, AA631969, AL119363, AL119418, U46341, AL037205, U46349, AL119335, AL119396, U46347, AL119496, AL036858, AL119401, AL038509, AL134525, AL134536, AL039074, AL119444, AL119439, AL042614, AL036924, AL042984, AL134531, AL042975, AL042551, AL037526, AL134538, AL134902, U46346, AL042989, AL042450, AL079442, AL043033, AL037639, AL042433, AL037094, AL042978, AL037082, AL037077, AL042973, AL042980, AL042965, AL036196, AL119399, AL043003, U46345, AL039564, AL037085, AL043000, AL079683, AL036767, AL038520, AL036190, AL038447, AL036268, AL037021, AL036774, AL037178, AL036998, AL036733, AL037615, AL036238, AL037027, AL036765, AL036719, AL036191, AC005822, AR066494, AR060234, A81671, AR023813, AR064707, AB026436, AR054110, AR043113, AA306038, H82569, AI754064, AA304583, AW130468, H65119, AA608729, R26953, AA664163, AW272606, R33048, R27084, AA152404, AA227482, AA347232, AC007051, AC007919</p>
697	HCRMZ75	874773	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 934 of SEQ ID NO:697, <math>b</math> is an integer of 15 to 948, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:697, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	
698	HCRMZ85	874774	<p>Preferably excluded from the</p>	<p>AW027705, AI341165, AI652171, AL079653,</p>



699	HCR0M08	874775	<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1480 of SEQ ID NO:698, b is an integer of 15 to 1494, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:698, and where b is greater than or equal to a + 14.</p>	<p>AA455320, AI262672, AI021922, AA564575, N76045, AA100397, AI041471, AI350656, AW391751, AI082743, AA243478, AA627599, D19863, AA249024, AF181897, W04450</p>
			<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 289 of SEQ ID NO:699, b is an integer of 15 to 303, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:699, and where b is greater than or equal to a + 14.</p>	<p>AI432644, AL042853, AI431307, AI431316, AI431238, AL047611, AI866581, AI815239, AI440260, AW151974, AI623302, AI567971, AI927233, AW151132, AI440238, AI866465, AI539771, AI537677, AI494201, AI804505, AI500659, AI815232, AI801325, AI866691, AI500523, AI538850, AI887775, AI582932, AI923989, AI590043, AI872423, AI284517, AI500706, AI445237, AI491776, AI289791, AW151138, AI926593, AI889189, AI521560, AI285417, AI500562, AI539800, AW172723, AI284509, AI582912, AI538885, AI440263, AI889168, AI866573, AI633493, AI434256, AW151979, AI866469, AI805769, AI434242, AI888661, AI500714, AI284513, AI888118, AI285439, AI859991, AI436429, AI623736, AI355779, AI889147, AI581033, AI371228, AI491710, AI440252, AI866786, AI860003, AI610557, AI242736, AL042488, AI828574, AI539260, AI887499, AI539781, AI539707, AI702065, AI885949, AI285419, AW089557, AI559957, AI521571, AI469775, AW074057, AI567953, AI815150, AI446495, AI952433, AI867068, AI225248, AL046356, AI358271, AI698352, AI282249, AI371229, AL041862,</p>

				AL043089, AW194509, AI955441, AL043321, AW058275, AL042533, AW151136, AL042515, AL040207, AI889191, AI432666, AI890907, AI866458, AL047422, AI561170, AI371251, AW162189, AI866510, AI888575, AI690946, AI469764, AL045891, AL047398, AI866461, W48671, AI923046, AI648567, AL042365, AI433157, AI521551, AL042944, AI888317, AI432653, AI798359, AI431323, AL043091, AL042729, AI431321, AI554821, AL135012, AI521465, AI049859, AL042787, AI863197, AI432656, AI267492, AL048403, AI334804, AL042655, AI371243, AI924051, AW129310, AL039390, AI885920, AL042981, AI521566, AA928539, AI273179, AA749449, AI446536, AI872315, AI798571, AI431315, AI539863, AI582910, AI285432, AI366900, AI355008, AI366910, AI203903, AL134524, AI623941, AL045619, AI561177, AL046990, AI493559, AI687614, AI888022, AA878808, AI252414, AW269092, AI582926, AI312364, AI801286, AI345180, AW274312, AI274759, AW269098, AL037602, AW268251, AI355017, AI499463, AL039287, AI355126, AI433976, AL045166, AI354981, AI610362, AW268768, AL037582, AL042745, AI567961, AI440239, AI521596, AI436438, AI888002, AI307604, AI521589, AI500061, AA504514, AI687588, AI537273, AI828572, AI537191, AW151970, AI436456, AI371265, AL046681, AI049850, AI963846, AI252153, AI567940, AI610357, AI817244, AI440261, AI612913, AL040459, AW151131, AI537943, AW075138, AI476694, AI285826, AW131994, AI539690, AI863014, AI955221, AI521594, AI355765, AI499512, AI889133, AI538881, AI805774, AI954200, AI927252, AI499508,

	AI499483, AI866820, AI500658, AI537925, AI282268, AL049423, AL133053, AF078844, AL133049, AL122101, AL133084, AL133113, AL133070, U30290, AL122049, E12806, AL133074, AF109683, AF090903, D83032, AL133557, I46765, AL117416, AL133015, U49908, S77771, A83556, A08910, AF058921, AL133608, A08909, AL122106, AF044221, A08908, A76335, E01614, E13364, AL137479, E12580, AF162782, I48978, AL137268, E06743, AF207750, X60786, AL080137, AL133565, AC004399, AL133076, AF028823, AF118092, AF017790, E13998, AF031903, A18777, AL137533, AC004213, AL022170, A08913, AF126247, AF082526, A86558, X79812, AF215669, S59519, AL137574, M27260, AL137555, AL137539, A08912, AF002985, AF111112, S83456, AL137298, AL049382, E06788, E06790, AR034821, E06789, AL122121, A18788, AF100931, AF159148, AL133655, AF026124, AF090886, S83440, AL031274, AC006039, E12579, S76508, AF113019, X66871, E05822, AL049314, AL137529, AF151109, AL133054, A65341, D00174, A14605, E01187, AF004162, AL137705, AF162270, E01963, I77092, AL137550, AL136884, D83989, U83980, AL080110, AF031147, AF079763, AF125949, AF039138, AF039137, AL133047, AF098162, AL110218, AC004383, AC002287, AC007869, AL133560, E12888, S63521, Y16645, AL137286, AL137478, AF013249, U58996, AF036268, AL137273, AL137488, AF185576, M92439, AR053103, AF182215, AL137276, AF113689, AL050024, D44497, AL117583, U53505, AF111849, AL133607, AF142672, Y09972, AL137541, AL117440, AL031346, AC005353, Z93784, AC005057, Z98036, AC007390, AC006501, AC007172, AC007056, AC007392, AC009233, AC005291, AC007298, AC006371, A32826, A30330, A32827, A30331, AL137557, A65340, AL049430, AF132676,

700	HBIPL82	874776	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 533 of SEQ ID NO:700, b is an integer of 15 to 547, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:700, and where b is greater than or equal to a + 14.</p>	<p>AF061836, AL122100, AF150103, AL117629, AB016226, AF110329, X87582, X9257, AF054986, I33392, AF118090, I42402, AL117457, AF026008, AL133016, AL133029, X86693, AL133014, AL050155, AF112208, X63574, AL137480, ARO11880, U88966, D16301, S78214, I89947, AR022283, AL133104, AL137526, AL049283, AL122111, AF036941, AF076633, AF153205, I48979, AL137284, AF180525, AL096751, AL133010, AF085809, X59414, AL080074, AC004200, AL050322, AL035458, AL133665, X72387, D55641, AL117648, AL122110, AF091084, AL049324, S78453, X66862, AL109672, I33391, AJ000937, A77033, A77035, X70685, AF069506, X72624</p> <p>AW236463, AA934586</p>
701	HBXBV89	874778	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2387 of SEQ ID NO:701, b is an integer of 15 to 2401, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:701, and where b is greater than</p>	<p>AL041196, AI174734, AI818167, AW027175, AI885412, AA861637, AI567464, AW007757, AL046529, AI199674, AW131788, AW058096, AI278213, AA314076, AI763223, AA826815, AA314412, AW169713, AA504396, AA256252, AI631521, AA488830, AA193266, AA614090, AI347284, AA603136, AW138007, AI248206, AA568780, W02835, N29825, AI091040, W30817, AA193528, W05581, AA310732, AA338877, AW083404, N70535, H81457, AL041195, AI571295, AI873719, AI953166, AA863177, H47241, T05339, AA987274,</p>

702	HCRPM45	874779	or equal to $a + 14$ .	AA864580, AI471327, AA338878, AI025214, AA255990, AA004772, AI557174, AI383280, AA229290, AA309912, AA229402, AW411021, N42518, AA761693, AA683316, AI904108, AI186957, AL134181, AA489077, AA861300, Z24985, Z36784, AC005254, AF001905, AC006430  AI820778, AI733535, AI820693, H25353, AF029308, U66061, AL049546, AC005345, AC004949, AL031007, AF003530, AC006548, AL030998, U73465, AC006479, AC007486, U80460, AL079333, AC005160, Z82216, AL009174, AL049875, AC007064, AL133312, AC005926, AC004911
703	HCQCT75	874780	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of $a-b$ , where $a$ is any integer between 1 to 702 of SEQ ID NO:702, $b$ is an integer of 15 to 716, where both $a$ and $b$ correspond to the positions of nucleotide residues shown in SEQ ID NO:702, and where $b$ is greater than or equal to $a + 14$ .  Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of $a-b$ , where $a$ is any integer between 1 to 397 of SEQ ID NO:703, $b$ is an integer of 15 to 411, where both $a$ and $b$ correspond to the positions of nucleotide residues shown in SEQ ID NO:703, and where $b$ is greater than or equal to $a + 14$ .	
704	HCRPO92	874781	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of $a-b$ , where $a$ is any integer between 1 to 711 of	AA456950, AA386216

705	HCRNM87	874783	<p>SEQ ID NO:704, b is an integer of 15 to 725, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:704, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 318 of SEQ ID NO:705, b is an integer of 15 to 332, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:705, and where b is greater than or equal to a + 14.</p>	<p>AI910713, R42070, AW003035, AI793046, AI653141, AA402495, AI769220, AI440526, AI280082, AI263023, AI680237, AW136904, AI359977, AI269309, AA405739, AA576608, AA513373, AI654888, W95226, AI609921, AI139078, AA933769, AI761067, AW009454, AW023685, AW299728, AW149440, AA405990, AA309655, AI762571, AI440034, AI000553, AI361426, AA535028, AA911081, AA868332, AI203844, AI499146, AL041862, AL046356, AL047675, AL042745, AL047092, AL045891, AL119748, AI866798, AL079977, AI250852, AI537273, AI799195, AI432666, AL042628, AI273142, AL045774, AI431424, AI436429, AW089664, AW131308, AI627988, AL042744, AL046926, AL045620, AL042787, AI371228, AL040243, AW149227, AI610557, AL045266, AL040207, AI800433, AI570781, AI433976, AL045500, AI433157, AL042488, AW151136, AI539771, AI537677, AI494201, AI500659, AI554821, AI815232, AI801325, AI500523, AL042538, AI582932, AI284517, AI923989, AI500706, AI445237, AI491776, AW151138, AI521560, AI889189, AI500662, AI284509, AI889168, AI866573, AI589267, AI633493, AI434256, AI805769, AI888661, AI284513, AI681985, AI888118, AI636445, AI889147, AI440252, AI610402, AI611348, AI366900, AI625589, AL039276, AW148716, AL042551, AW071417, AL045163, AW172723, AI572892, AL049085, AI887247,</p>
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		AI624548, AI590423, AI439717, AL048323, AW169653, AI800453, AW105601, AI567612, AI445165, AI269862, AI620284, AI246319, AW193134, AL043089, AI869377, AI866510, AI279984, AW082113, AI860003, AI564170, AI887499, AI758735, AI819970, AI590632, AL047422, AI537515, AW152469, AI073952, H89138, AW059837, AI497733, AI679179, AI364788, AI932638, AW104162, AW078735, AI275175, AI446373, AI500077, AW088903, AW089572, AI826225, AI811785, AW054931, AI440263, AW023590, AI499463, AI824576, AI432656, AA833760, AW089471, AI916419, AI564765, AL046990, AL036980, AW169604, AI829327, AI866786, AI918655, AI433384, AI610362, AI368868, AA012905, AW075413, AI520810, AI251434, AI274728, AI859585, AI963216, AI922901, AI440239, AI340659, AI784252, AW084869, AI932794, AI334930, AW302992, AW074869, AW268253, AI302910, AL042627, AI868204, AI890806, AA493923, AI680463, AI436456, AI306705, AI612885, AI801544, AI963846, AI567940, AI817244, AW151714, AI612913, AW148970, AI349957, AI690426, AI285826, AI564247, AW169848, AI863014, AI521594, AI499512, AW152024, AI889133, AI783861, AI872423, AI969601, AI567993, AI049851, AI954130, AI955987, AI923046, AI679764, AW118237, AI280670, AI859991, AW194441, AL040097, AI434223, N80094, AI610307, AI610429, AI433968, AI814087, AI446248, AW073898, AL122049, AL117585, AI2297, I03321, X96540, AF106862, A08916, AL133014, I89947, I48978, A08913, I89931, A08910, I49625, A08909, Y11587, AF153205, S61953, AL080074, AL133098, AL049464, AL110225, I26207, AF158248, X93495,

	E03348, L31396, U68387, AF146568, AL133072, L31397, AF104032, AF118064, AF118070, AL049314, AL137526, A08912, AL122110, AF017437, AL133080, AL137560, AL133077, E07361, AF111851, M30514, AL080127, AL137556, AF090943, U58996, AL133557, AF162270, AL137463, AL110280, AF113694, X82434, I48979, AL137557, AL122050, AF113676, AL133568, U80742, AL133113, U72620, AL049466, AF067728, X84990, AL050277, X72889, L19437, AL049452, I09360, Y11254, AL133640, AL117583, Z82022, AJ242859, Y14314, AL080124, AL137476, AL122123, AL050138, AL049300, AR038854, AF017152, AL133016, I00734, AF061943, U00763, AR038969, AF003737, AL133093, AL137550, X70685, AJ238278, E00617, E00717, E00778, S68736, AL117394, AL133565, U91329, AF111112, AL080060, AF113689, X87582, U67958, AL080159, AR000496, U39656, L30117, AR059958, AL137538, AL122098, U96683, AL133075, A45787, AL096744, AL117440, AL080137, AL137527, AF026816, AL122121, A93016, AF026124, S78214, E08631, AF125948, AL117435, U35846, AL137283, AF118094, A90832, A77033, A77035, AL137459, AL117460, AL117457, AL122093, AL137521, A58524, A58523, AF113019, AF113699, E15569, AF113691, AF113013, AB019565, AF078844, AF091084, AL133104, AF113690, AF113677, AF097996, Z72491, I42402, AL137648, E07108, AL050149, AL050116, AF125949, AL050146, AF090896, X65873, U42766, AL133606, AL133560, X63574, AF057300, AF057299, AR011880, AF119337, AL133067, AF090934, Y16645, A65341, E05822, AL050024, E04233, AL110196, AJ000937, AF087943, AL049430, I33392, AL049382, AL137271, E02349, AF183393, A93350, AL110221, AF090900, AF090903, Y09972, A07647, AL050108, AF177401, AF185576, AF090901, AL050393, AF079765, A03736, AJ012755,



706	HBJFU36	874784	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 712 of SEQ ID NO:706, b is an integer of 15 to 726, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:706, and where b is greater than or equal to a + 14.</p>	<p>X98834, E08263, E08264, AF061573, I41145, Z37987, U78525, AL137292, AL133049, AL137533, AL117432, E02221, AJ006417, AL080086, AL049938, AL049283, AF051325, AL137523, AF079763, AF111849, X92070, Y07905, AL050092, AL137480, AF008439, AB007812, AL110197, U49908, AL050172, X53587, AL137478, AF132676, AF061836, AF210052, AL122118, AF081197, AL133081, AR054984, AR013797, AL137273, AL137294, AF100931, X62580, AF067790, AL122111, AL080158, AF061795, AF151685, AF106827</p> <p>AI494291, AI582807, AA417018, AA608841, AW299459, AA417112</p>
707	HCRPZ29	874785	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 539 of SEQ ID NO:707, b is an integer of 15 to 553, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:707, and where b is greater than or equal to a + 14.</p>	
708	HCRONS8	874786	Preferably excluded from the	AP000065, Z36802

			<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 241 of SEQ ID NO:708, b is an integer of 15 to 255, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:708, and where b is greater than or equal to a + 14.</p>		
709	HCRNG90	874787	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1061 of SEQ ID NO:709, b is an integer of 15 to 1075, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:709, and where b is greater than or equal to a + 14.</p>	<p>AW271686, AWO25554, AI420969, AI202304, AA375089, AA337142, X55740, D14541, J05214, L12059, U21730</p>	
710	HCQDT67	874788	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 739 of SEQ ID NO:710, b is an integer of 15 to 753, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:710, and where b is greater than or equal to a + 14.</p>	<p>H49070, AI557262, T18597, AI557241, AI536138, AI525556, AI557084, Z32887, D59751, AI525500, AI557533, AI525302, AI525757, AI536070, Z33559, AI541356, AI557864, AI535660, AI557238, AI526078, AI557082, AI541365, AI557317, AI541205, AI557809, AI525316, AI525856, R29657, AI535639, AI540903, AI541321, AI525878, AI557731, D50992, AI541034, AI535813, AI557602, AI525568, AI525656, AI557155, AI557810, D30843, AI540974, AI541353, AI546829, AI541027, AI541048, AI541075, AI541346, AI536150, AI557312, AI557258, AI541450, AI557222, R18946, AI557408, AI557039, H65400, AI525666, AI535994,</p>	

711	HCVAC32	874790	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 765 of SEQ ID NO:711, b is an integer of 15 to 779, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:711, and where b is greater than or equal to a + 14.</p>	<p>N71206, AI557234, A62298, A82595, Z30183, A82593, AF006072, AR050070, U94592, U45328, A62300, AR025466</p> <p>AA308814, AA305159, D80268, D80366, C14014, C14389, F13647, C06015, D80522, Z21582, D81111, AW177440, D81026, C14227, D58283, AW178986, D80188, T03116, D50979, AA305578, D51423, D80251, D80043, AW352117, AA305409, D59859, D80253, D80168, D80166, D59619, D80210, D51799, D80240, D80064, D59502, D80014, D81030, D80038, AA514188, C14331, D80212, D51022, D80219, D80022, AA514186, D57483, D50995, D80195, D59467, D80391, D80164, D59275, D59787, D80227, D80024, D51079, D80439, D80248, D59610, D59889, D80196, D59927, C15076, D80269, AW178762, T03269, D80247, D80193, T11417, D80045, D80241, D80133, D80378, D51759, D52291, D80157, AW378533, C14407, C14298, AW178893, AW178906, D80302, AW360811, D51103, AW377671, D59627, AW378540, T02974, AI557751, AW378539, AW375405, D80258, AW179328, D51213, AW179019, AW378532, D45260, AW366296, AW360817, AW179020, T48593, AW375406, AW378534, AW377676, AW352171, AW179332, AW377672, AW179023, AW178905, AW177731, AW378528, AW178754, AW179024, D51250, H67854, AA809122, AW352170, AI525923, AW177456, C03092, AW178907, AW178908, AW179018, AI525917, H67866, D59317, AW360834, D59474, AW367950, D58246, AW178914, AW178774, AW178781, AW378543, C14957, D59503, AA514184, D51221, AW179013, Z30160, C14344, C14973, AI525920, AI525235, AW378525, AW352163, D58101, AI557774, AI525912, AI525227, AI535686, AI525242, T03048, D59551, C16955, H67858, AI525215, AA285331, D45273, AW378542, AI525925, Z33452, AI525237, T02868, C13958, D50981, AB024705, AR008278, AR060385,</p>
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712	HCYBK32	874791	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 556 of SEQ ID NO:712, b is an integer of 15 to 570, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:712, and where b is greater than or equal to a + 14.</p>	<p>AR018138, A62298, AU132110, A84916, A62300, AF176315, AB028859, AF058696, A82595, AB002449, X68127, I50126, I50132, I50128, I50133, X67155, Y17188, D26022, A25909, AR060138, AR016514, A67220, D89785, A78862, D34614, Y12724, A45456, AR008443, A26615, AR052274, A94995, AR066488, Y09669, A43192, A43190, AR038669, AR066487, A30438, D88547, I14842, AR054175, AR008277, AR008281, Y17187, AR016808, X82626, D50010, A63261, AR025207, AR008408, AR062872, A70867, AR016691, AR016690, U46128, I79511, A64136, A68321, AR060133, D13509</p> <p>AA305485, AW378532, H67854, AW360855, C14014, AI620988, D81026, D80045, D80522, C14389, AL031596, Z95113, Z82203, AC008018, AC000003, AC002300, AC009336, AL022163, AC005659, AC002054, Z93023, D34614, AL049795, AC002472, AC004447</p>
713	HWMCE07	874793	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 863 of SEQ ID NO:713, b is an integer of 15 to 877, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:713, and where b is greater than or equal to a + 14.</p>	<p>AI694457, AI084574, H73226, AA374222, H63305, R10177, W22116, AI815151, AI744548, R23063, AW170301, AI912329, H74235, AI760693</p>

714	HCR0L83	874795	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 642 of SEQ ID NO:714, b is an integer of 15 to 656, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:714, and where b is greater than or equal to a + 14.</p>	<p>AL021182, AC005304, AC002509, AC004801, AC007073, AC004870, AC004835, AC004963, AL034449, AJ010597, AP000965</p>
715	HCYBM89	874796	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1516 of SEQ ID NO:715, b is an integer of 15 to 1530, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:715, and where b is greater than or equal to a + 14.</p>	<p>AL079941, AA992942, AI817243, AI767556, AI766123, AA541673, AI016265, W37912, AI088252, AI187112, AW327720, AW024610, AW408508, N45388, N29507, AI569234, AI347459, AA156676, AI440004, AW452133, AA503868, AA703764, AI478659, AA112546, AA812913, N26817, AI819565, AA305708, W96378, AI311576, AA278209, AA305267, AA480175, W84794, AA581604, AA581605, AW337265, R73725, AI383351, AI024650, AI365019, AA112610, N99139, H54289, AI453204, AI637926, AW005019, AA193572, AA773660, W96377, AA463676, AA458599, W84841, R80844, H03715, AA781700, AA894704, H54367, W15585, AA445962, AA250802, AA431705, R52442, R80845, W23974, AI744046, R67477, AI141754, AA354090, R35475, R68491, R21025, AA193609, D61894, R73645, R26394, T31927, AI525962, H03716, AA156808, R46135, N57449, N55968, Z41367, AI760807, W31661, AA431498, AA249349, AA759185, AI282529, AA337457, AA037028, R52408, AA337363, AI183301, AA278889, Z45699, AA843795, AF150117, D51799, C14331, D80166, D59619, D80210, D80240, D50979, C14429, D80219, AA514188, D80522, AA305409, D80227, D80133, D80269, C14389, D51060, D80248, D81026, D59859,</p>

	AW377671, D58283, D51423, D80253, D80022, D80366, D80195, D59467, D80391, D80164, D59275, D80043, D59787, D59502, D81030, D59610, D50995, D80378, D80212, D59927, AW360811, D80188, D80196, D51022, AW177440, D57483, C15076, AA514186, AA305578, D80038, D80024, D59889, C14014, D80268, D80193, AW178893, D80045, D80251, AW178983, D80241, D80439, AW375405, D80247, D80302, T03269, AW360844, T11417, AW178906, C06015, AW366296, AW179328, AW360817, D51103, AW375406, AW378534, AW179332, AW377672, D59653, AW179023, AW178905, C75259, AW378532, AW177501, AW177511, AW178914, AW360834, AW352171, AW377676, AW352170, AW177731, D80157, AW178907, AW378528, AW178762, AW179019, AW179024, AW178980, AA809122, T48593, C05695, AW176467, D51250, D51759, AW367967, AW360841, AW177505, AW179020, AW178775, AW178909, AW177456, AW179329, D80134, AW177733, AW178908, AW178754, AW179018, AI557751, AW352158, AW352117, F13647, AW369651, AW178774, D80064, D80132, AW352120, AW179004, AW179012, C14344, AW378525, AW352163, D58253, C14407, D45260, D80014, D81111, AW378543, AW177728, D58101, AW179009, AW178911, AW367950, AW177722, AI535686, AW378540, AI910186, AW352174, AC006378, AC006479, AF007551, AR053396, U42755, AF007552, AR018138, A84916, Y17188, A62298, AB028859, A62300, AR008278, AJ132110, A82595, A30438, AF058696, I50128, D26022, A25909, A94995, Y12724, I50133, X82626, AR060385, X67155, A67220, D89785, A78862, D34614, AB002449, AR008443, I50126, I50132, D88547, AR060138, AR066488, AR016514, A45456, A26615, AR052274, X68127, Y17187, A43192, A43190, AR038669, Y09669, AR066487, AR008277, AR008281,

716	HCRNX33	874797	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 728 of SEQ ID NO:716, b is an integer of 15 to 742, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:716, and where b is greater than or equal to a + 14.</p>	<p>AR025207, I14842, AR054175, A63261, D50010, AR062872, AR016691, AR016690, U46128, AR066490, A70867, I18367, AR008408, A64136, A68321, D13509, U79457, AR060133, AB012117, I79511, AR032065, AF123263, AJ000347, AR008382</p> <p>AI458659, AI718398, AI912182, AA912114, AI817919, AW340262, AA978177, AI942220, AI364351, AI420859, AW072094, AI869085, AI703432, AA889858, AI693223, AI693660, AI582932, AI358701, AI537677, AI135661, AL041573, AI285735, AI349645, AA572758, AI554821, AI564247, AI917253, AI866780, AI288285, AW268253, AI345253, AI801544, AI955906, AI348897, AI537076, AA848053, AI571000, AI636456, AI343059, AI611348, AW161579, AI174819, AI174394, AI349933, AL047344, AI439762, AI654276, AL119836, AI668893, AI340603, AI625094, AA20722, AL046942, AI499263, AI345587, AA279293, AI312428, AW162189, AI494201, AI254226, AI888621, AL040241, AI344935, AI619607, AW268083, AW274192, AI446373, AI537273, C16221, AI567940, AI521560, AL048323, AI302910, AI698391, AL048340, AI923989, AI819976, AI539808, AW089572, AI560012, AI537991, AI446538, AW302988, AI923370, AI349787, AI580984, N71180, AI345745, AI610557, AI864836, AI623396, AW079075, AI554344, AI623682, AA470491, AI799234, Z99428, AI500061, AI969641, AW059713, AI345735, AI364788, AI929108, AI916419, AW054931, AW118382, AI270657, AW071417, AI963846, AI590423, AW088899, AI246319, AI524526, AI366549, AI636719, AI539153, AA176980, AI687127, AI539771, AL036396, AI683395, AI560030, AI866608, AW169658, AI805688, AI334884, AI611743,</p>
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	AI249877, AW083804, AI696626, AI801322, AI589993, AI805638, AI365256, AI345347, AI343037, AI366992, AL037582, AL037602, AI345677, H89138, AA493647, AI340627, AI310925, AL038605, AI340519, AI174591, AW020693, AI590120, AI307543, AI888953, AI345251, AW151138, AA938092, AI349957, AI345224, AI336513, AI889168, AI340659, AI267502, AA579232, AI348895, AA635382, AI866082, AI572892, AI345005, AI538817, AI815232, AI612885, AI805769, AI313352, AI345397, AI311892, AI334930, AI349256, AI307736, AI349622, AI632997, AW118518, AI436429, AL036274, AI349266, AI334452, AI344938, AI345370, AI702406, AI345674, AI345739, AI538885, AL036804, AL038778, AW149227, AW403717, AI345567, AI476109, AI570781, AI336585, AI310606, AL121365, AI493576, AI567360, AI348854, AI445976, AI798456, AW068845, AW151136, AW022682, AI608813, AL036718, AI500523, AW163834, AI859464, AW071380, AI345608, AI521012, AI277255, AI589267, AL036802, AI590415, AL043975, AW269097, AL036146, AI273142, AW268072, AI635492, AL036631, AW082033, AW075084, AA974049, AL037454, AI950664, AI312399, AI349937, AW020095, AI824746, AI805385, AI242251, AI307210, AI307708, AI344817, AI312325, AI500659, AI284509, AW172723, AA493923, AI633125, AI818980, AI345471, S72504, D31716, I89947, AL049300, AL117435, AF113690, S78214, AL133075, AL049466, AF097996, E05822, A08916, AR011880, AL122093, Y09972, AL133104, I48978, E02349, AL122123, AF146568, A08910, A08909, AJ238278, AL117457, AL133016, AF090934, AF125949, X87582, AL137459, AF090903, A08913,



	AF113019, I89931, Y16645, AL049938, AL117585, AF177401, I49625, X84990, AL110221, S68736, AL133606, U00763, AL080060, AL137648, AJ242859, AF183393, AL137538, AF113699, AL133557, AL096744, AL050277, AF106827, AL050146, AL12297, X82434, AL049452, L31396, AF158248, AL137550, AL080137, AL117394, L31397, AJ006417, AL137526, AL050024, AL049430, AL049347, AL035458, AF113677, AF118070, AJ000937, AR038969, I33392, U42766, AF079765, AF113013, AL049464, AF017437, I09360, AL110196, AL122050, A77033, A77035, AL049382, AF090900, AF106862, AF111112, I48979, AL137556, AL117583, U96683, A45787, A08912, AL050138, U35846, AF104032, AF078844, E03348, AF090943, AL133640, AL049314, AL110197, AL050393, AF113691, AL122110, AF118064, AR000496, U39656, AF141289, E07108, AF090896, A07647, AL133077, AL110225, AL133113, AL133565, AL137479, AR038854, AL080086, AF003737, AL137557, I03321, AF017152, AL080127, AL050116, AL133072, X63574, AL137476, AF162270, AF026816, AB019565, AL133093, Y11254, X70685, AL133098, AL117460, AL137527, X98834, U72620, AL133067, AL137283, AL049283, AL050172, AF079763, AL122098, AL050149, AL137533, AL050108, AL137521, U91329, X96540, S61953, Y11587, AL137560, U58996, AR059958, AL133568, AL133014, AF090901, A03736, X72889, A58524, A58523, AF113694, AL137463, I41145, AF113689, U67958, A08908, AL133080, AL080159, I26207, I17767, Y14314, AF113676, U80742, X93495, AL122121, AF057300, AF057299, AF061943, AL133560, AR013797, AL122049, X62580, AL137523, AL117440, AJ012755, E07361, I29004, I00734, A18777, E04233, AF087943, E08631, E00617, E00717, E00778, AF061573, A93016, AF118094, A65341,

717	HCYBM31	874800	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 806 of SEQ ID NO:717, b is an integer of 15 to 820, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:717, and where b is greater than or equal to a + 14.</p>	<p>I42402, AF111851, Z37987, AF125948, A90832, A08915, A08911, AC002467, AL080124, X81464, AF119337, L30117, X92070, AF026124, E15569, U88966, AL110159, Z72491, AF210052, Z82022, S77771, X65873, Y10080, AF091084, AF126247, AF067728, AL137271, M30514, AF153205, A93350, AF185576, AL110280, AF081197, E08263, E08264, I89934, AF065135, AL122111, AL080074, AF111849, AF017790, U68387, E02221, AL133665, S76508, AL137539</p> <p>AI566493, AW375947, AA305406, AA313526, AA056417, AI732393, AA053102, AI623483, AI732453, AI262603, AA088861, AI920859, AI922856, AA565642, AI688206, AI721059, AI601183, AA045860, C14331, D50995, D59467, D80522, D80133, C14429, D80269, D81026, D80227, D59610, C14389, D80195, D51060, D50979, D59502, D80164, D59275, D80248, AW377671, D51022, D58283, D80366, D59859, D51799, D80022, D80166, D51423, D59619, D80210, D80391, D80240, D80241, D80253, D80043, D59787, AA514188, C15076, D80038, AA305578, D81030, D80378, D59927, D80212, D80193, D80196, D80188, D80219, AA305409, D80045, C06015, D80251, D57483, C14014, D59889, D80024, AW178905, AW360811, D80268, AW177440, D80302, AA514186, AW178983, D80439, AW178893, T03269, D80247, AW178909, AA809122, AW178907, AW375405, AW360844, D59373, AI535686, C75259, AW177501, AW179328, AW177511, AW366296, T11417, D51103, AW360817, AW375406, AW178906, AW378534, AW352171, AW179332, AW377672, AW179023, AW378532, AW352170, AW377676, AW360834, D80157, AW178908, AW360841, C05695, AW177505, AW178775, AW178762, D51759, AW177731, AW178911, AW378528, AW178754, AW179019, AW179018, AW179024, D80132, AW352117,</p>
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				AW176467, D51250, C14407, D59653, AW367967, D80134, AI535959, AW179020, D58253, AW177456, AW369651, AW179329, C14344, AW178980, AW352158, AW178914, AW177733, AW178971, T48593, F13647, D45260, AW179017, AW378525, AW179004, AW352174, D81111, AW178774, H67866, AW378543, AW179009, AW179012, C14227, AW352120, AW352163, T03116, C14973, AI525923, H67854, D80064, D80014, D59503, AI557751, C03092, D80258, AW177722, AI910186, AW177728, D58246, D58101, AW367950, AI905856, T02974, AW378540, D45273, AA514184, AW178781, T03048, D59317, D51221, D60214, AI525917, AW378533, AI557774, AW178986, AW378539, AW177734, AW177723, D59474, D59551, AI525920, N66429, AI535850, D60010, AI525227, AI525235, C14957, C14298, D80168, C14046, H67858, D59627, AW179011, AI525242, AW179013, AI525925, AI525912, AI525237, AA285331, AI525215, D51097, D51213, D52291, Z33452, AI525928, X83228, U07969, A84916, A62298, A82595, A62300, AR018138, Y17188, AR016808, AF058696, AB028859, AJ132110, Y17187, AR008278, D34614, AR060385, AB002449, X67155, D26022, Y12724, A25909, A94995, X82626, A67220, D89785, A78862, D88547, AR008443, I50126, I50132, I50128, I50133, A30438, AR066488, AR016514, AR060138, A45456, A26615, AR052274, U46128, I14842, AR025207, Y09669, A43192, A43190, AR038669, I18367, AR016691, AR016690, AR066487, AR054175, X68127, AR008277, AR008281, A63261, D50010, Z82022, AR066490, A70867, AR062872, AR008408, I82448, I79511, A64136, A68321, U79457, AB012117, D13509, AR060133, A85396, D88507, AR066482, AF123263, A44171, AR032065, A85477, I19525, A86792, X93549, AR008382 AL121652
718	HDAAX73	874801	Preferably excluded from the	

719	HDACJ67	874802	present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 449 of SEQ ID NO:718, b is an integer of 15 to 463, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:718, and where b is greater than or equal to a + 14.	AA305080	
720	H2CBL90	874803	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 526 of SEQ ID NO:719, b is an integer of 15 to 540, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:719, and where b is greater than or equal to a + 14.	AI951683, AI809714, AI809721, AI394533, AI767318, AI094691, AA029855, AA028984, AI290496, AI369846, AW016201, AA458598, AA307690, AW050754, AI360916, AI869170, AA909457, AW170168, AI970554, AA551468, AI283689, AW277118	
721	HPCOE53	874804	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 823 of SEQ ID NO:720, b is an integer of 15 to 837, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:720, and where b is greater than or equal to a + 14.	AA228027, AA609203	

722	HDPGS84	874805	present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 724 of SEQ ID NO:721, b is an integer of 15 to 738, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:721, and where b is greater than or equal to a + 14.	AL043048, AA742189, AW054764, AI561117, AI992302, AI923292, AW166727, AI274788, AA234559, AI355592, AA112369, N46618, AW377234, AW377342, AW377356, AW377386, AI587445, AI678832, AA047021, AW377302, AI219803, AJ002744
723	HCRMQ21	874807	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 492 of SEQ ID NO:722, b is an integer of 15 to 506, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:722, and where b is greater than or equal to a + 14.	W21045, N95503, AA609427, AI160455, AI023376, N64494, AI360803, AI129199, AI761577, AI288246, D79868, AI382744, AI125069, R27394, D63048, AI288350, AI418959, AW024620, N95217, AI557123, AI471229, AI744766, AA494313, AA748657, W45037, AW451949, AI188674, AI362545, AI864630, AW008348, AW130278, AA612882, AA088415, AW439086, AI199886, AA872816, AW105430, AI017637, AI333449, AA092740, T24817
724	HDTBM35	874809	Preferably excluded from the	AA767157

725	HCYBL83	874810	<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 434 of SEQ ID NO:724, b is an integer of 15 to 448, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:724, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1207 of SEQ ID NO:725, b is an integer of 15 to 1221, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:725, and where b is greater than or equal to a + 14.</p>	<p>AI623321, AW300556, AI863182, N41015, AA609331, AI262113, AA421238, AI675316, AA677554, AA693786, N47992, AA421278, T79801, AA305618, N51199, W90182, W90035, N47120, AW195215, AW377671, AI535959, F13647, D80522, D81026, T11417, C14331, AA809122, AW178893, D80251, AW177440, D80133, C14429, AW360834, D80166, AW375405, D80248, C06015, AW360817, AW360811, AW177731, D80366, AW366296, AW179332, AI557751, AW360844, T03269, C14389, AW179328, T48593, AW375406, D80014, D80439, AW378534, AW178906, D58283, AW377672, AW360841, AW179023, AW178905, D59859, D80022, D80195, AA305578, D80193, D59927, D59467, D51423, D59619, D80247, AW378528, D80210, D51799, D80391, D80164, D59275, AW178762, D80240, D80253, D52059, D80038, AW179019, D80043, D59787, D80227, AI535686, AW378533, D59502, AA305409, AW378532, D45260, D80258, D81030, AW178914, D80269, D59610, C14014, D80212, D80268, D80196, D80188, D51022, D50979, D80219, D50995, AW176467, AW352120, AW179024, AA285331, D80302, AW179020, D80157, AW377676, C15076, D51060, AW352171, AW177733, D57483, D51103, AW352170, D59889, AW178774, AW178907, AW178908, C03092, D80045,</p>
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726	HDTJE91	874812	<p>AW352117, D80024, AA514186, AA514188, D51759, AW367950, D80241, D80378, D51250, AW178781, AW378539, AW378543, AW179329, AW378525, AW352163, AW179018, AW378542, AW178911, AW177505, AW178775, AW178980, AW178909, AW177456, AW179004, AW177728, AW178986, AW178754, AW378540, AW352158, AW360855, AA514184, D58101, D81111, D58246, D59503, H67854, AI525917, C14227, D80064, D80390, H67866, C05695, T03116, D59317, AW177734, C14973, C75259, AI557774, D59474, AI525920, AI525923, AI525227, AI525235, AI525925, AI525215, AI525928, AR020753, X91148, X75500, X83030, AR020750, X59657, AR020749, X78567, X68127, I47970, Y17187, AF123263, A82595, A30438, A84916, I50126, I50132, I50128, I50133, A62298, Y17188, A62300, AR018138, U46128, A94995, Y12724, AR062872, AR016514, AR066488, AR060138, A45456, AB028859, D26022, AR060385, AR066487, AJ132110, A26615, AR052274, A43192, AR008278, A63261, A43190, AR038669, AF058696, A25909, A70867, A67220, D89785, Y09669, A78862, D34614, X67155, AR008443, AR016691, AR016690, AB002449, D88547, A64136, A68321, I14842, D50010, AR054175, AR050680, AB019242, AR025207, AR060133, AR008408</p>
726	HDTJE91	874812	<p>AA013006</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 206 of SEQ ID NO:726, b is an integer of 15 to 220, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>

727	HE6BJ48	874813	<p>NO:726, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 880 of SEQ ID NO:727, b is an integer of 15 to 894, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:727, and where b is greater than or equal to a + 14.</p>	<p>AA838817, AI363359, AW381999, AW381997, AW382037, AW382000, AA130883, AW382042, W44317, AW382041, AW024421, AW382039, AI860245, AW382036, AW381961, AA181315, AA476550, N36268, AI745226, AA934010, AI864889, AW190584, AI934734, AA476511, W45689, AA397755, AI360479, AW296273, AA725447, AI057565, AI057575, W69682, AW382054, N48961, AW294934, AI289253, AI420914, R73005, AA834847, N26942, AA287909, AW129159, AI469219, N93170, AA722597, N24813, AA480568, AA973375, AA608646, W69923, AI802361, AA187057, AA922809, AW405922, AA765559, N50732, AI371721, W69742, AA025176, AI198763, N29758, AA489547, AA025086, W38774, AA846251, AA469332, AA628720, AI620348, N45678, R73609, AA485936, AA953969, AI419552, AI673394, N79465, AI371497, N55055, R92585, AW382008, AI380273, AI380284, AA130938, TI0624, AA644324, F30043, T24907, W02954, C04728, AA476411, AI265839, AA215872, AA781266, AA972633, AA845384, AI886300, AI918596, AW073685, W88920, AA244168, AA428402, AI199155, N45235</p>
728	HE8NK63	874815	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 829 of SEQ ID NO:728, b is an integer of 15 to 843, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:728, and where b is greater than or equal to a + 14.</p>	
729	HDTHF30	874816	<p>Preferably excluded from the present invention are one or more</p>	<p>AA393337, R14286, AI469488, AC005156</p>



730	HDPY54	874818	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 738 of SEQ ID NO:729, b is an integer of 15 to 752, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:729, and where b is greater than or equal to a + 14.</p>	<p>AI242679, AI128033, AI204040, AA463374, AA609277, AI092770, AI372861, AI650665, AA131907, AA503404, AI658580, AA969174, AA425154, AW022724, AA480929, AI219771, AA904881, AI925661, AA515933, AA464617, AI350638, AA534042, AA632228, D62936, AI352219, AA303392, AA928391, AA455315, AA759364, AA344086, AA027060, AA652905, AA974613</p>
731	HE2LN12	874819	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1043 of SEQ ID NO:731, b is an integer of 15 to 1057, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:731, and where b is greater than or equal to a + 14.</p>	<p>AW069817, AA889537, AI304644, AI424965, AA442375, AA437296, AI685473, AA922676, R80299, AA749272, AA903905, AI283505, T93911, AI859758, R80197, AA285021, AA678303, T93867, AI950607, AA454122, AA699761, AI439452, AI949510, AI269205, AI284035, AI950729, AI932794, AW151136, AI884318, AW169604, AW073708, AI569975, AW020397, AI288305, AI630928, AI690748, AW131282, AI955117, AA872507, AI445829, AI872423, AW079409, AI473451, AI582932, AW023072, AI561038, AI270099, AI473799, AI610895, AI524671, AW051088, AW103928, AI633125, AI927233, AI702073, AI698391, AI538564, AI815232, AW019988,</p>

	AI915291, AW152182, AI538850, AW166583, AI889189, AI784252, AI473536, AL046618, AI952217, AI866469, AI572096, AL039716, W74529, AI440239, AI682798, AI591420, AW191844, AI570807, AI538055, AI952145, AW008589, AI687809, AW078895, AI440426, AW238688, R32821, AW117926, AI433157, AI365256, AI685798, AI619737, AW118496, AW198090, AI590227, AL046595, AI281757, AI309244, AI566670, AI375303, AI355779, AW102794, AI802542, AW148423, AL043355, AI587606, AI539771, AW089275, AW148294, AI955917, AI538980, N33175, AI963346, AI417790, AI635467, AI696570, AI590134, AW083778, AI619426, AI866770, AA514684, AI554821, AI670009, AI679266, AI280732, AI274508, AI648509, AI627893, AI287449, AI610799, AI521560, AW102924, AI254731, AW080746, AA806720, AL036673, AI634345, AI572021, AI273085, AI932966, AW263355, AI889376, AI471712, AI678446, AI571439, AI499963, AL037030, AI536638, AI640704, AI354630, AI610402, AI673363, AA502794, AI564259, AI624293, AL039086, AI891031, AI567373, AW162194, AW074161, AI933992, AI956080, AI636588, AI866040, AA788861, AI285448, AI633198, AW198021, AI651840, AI923370, AL046466, AI525653, AI890507, AI963458, AW168503, AW073677, AI888621, AI636585, AI868931, AW169132, AW085734, AI571867, AI819522, AW192652, AI500463, AW080090, AI609236, AI500061, AI631273, W46378, AI890907, AI913330, AI539800, AW080992, AW129230, AA641818, AI628331, AI561231, AA805434, AW026087, AW081515, AI874261, AI554343, AA001397, AI971615, AI570861, AI609409, AI471282, AI591387,

AI345688, AW167021, AI611738, AI768496,  
AI926878, AW026882, AI538764, AI917963,  
AI612750, AW193125, AI159837, AW050850,  
AI500714, AI521040, AI811373, AI859991,  
AI623941, AW118518, AW081866, AI609589,  
AW192701, AI439745, AI559586, AI862139,  
AI609069, AI559296, AW168452, AL045500,  
AI251221, AA579618, AL037454, AI916419,  
AI912510, AW088628, AI961589, AW163834,  
AI270706, AI799183, AB002350, AF067728, I89947,  
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AF030513, AL080159, A77033, A77035, AL080148,  
AL137480, AJ005690, A15345, AL117460, I09499,  
A08910, A08909, A08913, AL137529, AL137550,  
AF003737, A21103, AF126247, AL137267, A08908,  
AL023657, AF061981, A52563, AF097996, AJ000937,  
AL137271, A08912, Y07905, AF032666, A18777,  
Y11587, I33392, AF183393, AL117649, AL117440,  
AL133113, E12747, S36676, AL137557, I48979,  
AF111849, AL122100, M27260, AF090903, AL050149,  
AF177401, AL050155, AF106657, AF139986, Z97214,  
D83032, AL137479, AL050393, AL137463, I89931,  
AL133067, AF087943, AL137533, AL050138,  
AL133560, I49625, A93350, A18788, I89944,  
AF162270, AF113019, A08916, E02349, AL110221,  
AF106862, AF091084, AF113677, A49139, AF185576,  
AL133665, A58524, A58523, AR020905, AF073993,  
AL117416, AF106697, A45787, X82434, A65341,  
AF051325, U58996, AL110296, AJ242859, AL137538,  
AL117435, AJ012755, I89934, AF026816, AF113690,  
AL050277, AL133558, AF054599, AL133080, X80340,  
AL080154, I17767, AF153205, Y14314, AF061573,  
AF210052, AF113691, AF031903, AF090934,  
AL122050, AL137560, AF069506, AL050092,  
AL137294, AL110280, AL110218, L13297, L19437,  
AL049283, AL137459, I17544, AL122045, AR011880,

732	HWLUR88	874820	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 465 of SEQ ID NO:732, b is an integer of 15 to 479, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:732, and where b is greater than or equal to a + 14.</p>	<p>AF118094, AL080126, E02221, AL137292, AL122110, AL110196, AR029490, X98834, AL122123, I00734, AF079763, Y10080, Y16645, AL137478, AL049314, AL133081, I46765, AF026124, AL133016, E00617, E00717, E00778, AF158248, E06743, AL137488, A12297, X65873, U35846, U88966, U00763, U67958, X62580, AF031147, E07108, AL050116, U80742, U78525, AL049452, AL096751, A03736, X63574, S78214, AR013797, AF028823, AL050024, X60786, E04233, AL049430, AF118090, AB007812, Y09972, AL049426, AL110222, AL133606, S76508, AF057300, AF057299, X96540, AL117438, E02253, AF113699, A76335, L30117, X84990, AL133557, AF017152, AF000301, AF061795, AL117457, AF151685, I66342, U49434, AF090901, AL137521, AF008439, X81464, AF111112, AB019565, AF113694, AL133104, E03348, AL137283, AR034830, I96214, I28326, AL049938, AL110197, AL137648, AF159615, AL117585, U68233, I92592, A07647, E08631, AL050146, AL080074, AL137548, AJ006417, X72889, A23630, AL110159, AL080124, AF067790, AL133640, AL122106, Z37987, AL117578, AF090900, U00686, AF040751, AL050108, AI813370, AI347789, AW172489, AA632341, AI640332, AI831043, AI634781, N54622, AI243330, AA465716, AI537517, AI286048</p>
733	HESSB04	874821	<p>Preferably excluded from the present invention are one or more</p>	<p>AA464464, AI082218, AW182490, AI379580, AA909005, AI635358, AA774283, AI803700,</p>

734	HE9QM31	874822	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1505 of SEQ ID NO:733, b is an integer of 15 to 1519, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:733, and where b is greater than or equal to a + 14.</p>	AA662215, AW301638, AI363123, AI474335, AI123665, AI190331, H96655, AI823462, AA418515, N39183, AI283895, AI344676, N67658, AI356942, AI275386, AI086744, AW340859, AA478632, AI992081, AA055027, AA332619, AI073593, AW391585, AW391557, AW391597, N30407, AI828565, H66960, AW071063, AW367530, AI435912, AA883345, AA620895, AA662176, AA457116, AI082686, T61810, W01126, AA366710, AW014626, AA332593, AA598450, AI470713, T94660, T94309, AW391546, AI216703, AL121213, AI284173, AI023567, AW361583, AI473308, T24444, AW130493, AI053434, AI054246, AI307426, AI053816, AW301818  AA100448, AI310529, AA100445, AI954572, AA313352, AI221151, AI572035, AA044643, AI357541, AI056009, AW014460, AA846147, AI221914, Z41264, AA452975, N45557, AI364800, AA135867, N28381, AI653149, AA042829, AI890761, AI373810, N41344, AI290777, AI287638, AA770036, AA135868
735	HTELU32	874827	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1435 of SEQ ID NO:734, b is an integer of 15 to 1449, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:734, and where b is greater than or equal to a + 14.</p>	AI859095, AW001089, AI754571, AA024427, W93217, AI754568, AI970128, AA705518, AI368207, AA582905, W93216, AI660520, AI739331, AA535050, AA339696, AA024426, AW131858, AI357688, AA280596, R28813, AL046820, R28840, AF088072, AL117629

736	HEMGV90	874828	<p>or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 900 of SEQ ID NO:736, <math>b</math> is an integer of 15 to 914, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:736, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	<p>AI393309, AW005351, AI807923, AW166132, AA194090, AI799077, AI916382, AW328387, AI131240, AA287690, AA855025, AI694793, AI362805, AI131388, AI198516, AA287658, AI701814, AW139698, AA934428, AI824988, AW328388, AI680753, AA304908, AI654495, AI955554, AW340414, AI188081, AI630546, AW300307, AA062563, AI969069, AI309588, AI266070, AA987983, AI675830, AI138878, AA960973, AA973643, AI990363, AW087574, AW138983, AI741149, AA308513, R01958, Z63217, Z62190</p>
737	HDTMC78	874829	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 1213 of SEQ ID NO:737, <math>b</math> is an integer of 15 to 1227, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:737, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	<p>W75954, AI818978, AW104295, AA310716, AI268282, AI695027, AI338037, N51604, AW194256, W72858, AA910060, W38965, AA034219, AA972762, AA932804, R31025, AI702974, N53893, AI381410, AI701035, AA033535, AI971270, R31515</p>
738	HFOXN77	874830	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 761 of SEQ ID NO:738, <math>b</math> is an integer of 15 to 775, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:738, and where <math>b</math> is greater than</p>	<p>W61005, W60917, AA594318, W78840, AA973426, T67067, H82716, T67023, AA057235, W32151, AI274912, AI245780, AI420911, AA058680, H44819, AI334825, AI139937, T93264, W22954, H45775, N70872, H83584, H43045, AW136595, H42569, T67066, AI783774, W06829, W32003, W80739, H21819, N91786, H27240</p>

739	HWLMW6 1	874832	or equal to $a + 14$ . Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of $a-b$ , where $a$ is any integer between 1 to 1423 of SEQ ID NO:739, $b$ is an integer of 15 to 1437, where both $a$ and $b$ correspond to the positions of nucleotide residues shown in SEQ ID NO:739, and where $b$ is greater than or equal to $a + 14$ .	AL048242, AA488387, AI859912, AA635142, AI634222, AI094012, AI753483, AI079976, AI004764, AA774688, AI890561, AW361493, AI805597, AI674711, AI014503, AW272372, AI080247, AI919501, AA344044, AW408115, AA503765, U22233, AR059583
740	HHFLR55	874835	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of $a-b$ , where $a$ is any integer between 1 to 1375 of SEQ ID NO:740, $b$ is an integer of 15 to 1389, where both $a$ and $b$ correspond to the positions of nucleotide residues shown in SEQ ID NO:740, and where $b$ is greater than or equal to $a + 14$ .	AI478119, AW297828, AA133259, AA164334, AI688009, AA313903, AA298157, W52898, N49843, Z43233, AA418223, AA234654, R13291, W00517, AI521689, AA223389, N78442, AA090729, AA650256, N76619, N76618, AA375175, AA418077, T10773, AW179049, AA295774, D58310, U10550, U13052, Z80109, U13053, U10551, U34830
741	HWLQO14	874836	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of $a-b$ , where $a$ is any integer between 1 to 838 of SEQ ID NO:741, $b$ is an integer of 15 to 852, where both $a$ and $b$ correspond to the positions of nucleotide residues shown in SEQ ID NO:741, and where $b$ is greater than	W73189, AI739658, AW162602, AI038197, AA515992, AA505599, W72792, W76439, AA505559, AI372041, AA505550, AI344182, AI345860, AI345870, AF025304, L41939, AA505740

742	HHGDC54	874837	<p>or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 432 of SEQ ID NO:742, b is an integer of 15 to 446, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:742, and where b is greater than or equal to <math>a + 14</math>.</p>	AC005332	
743	HMSCD54	874843	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 878 of SEQ ID NO:743, b is an integer of 15 to 892, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:743, and where b is greater than or equal to <math>a + 14</math>.</p>	AA521238, W56901, N94826, W79140, W39103, N29199, W79333, AW403689, R78672, T84674, N49349, R13386, AW407725, AW388564, AI300084, AW388522, AW388547, W21163, AW388541, AA355390, AW388412, AI817084, AI913840, F03716, AW388542, AI816739, AW388422, N63570, AI809415, H21737, AI991028, AW009328	
744	HISCH48	874844	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 686 of SEQ ID NO:744, b is an integer of 15 to 700, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:744, and where b is greater than</p>	AI142131	



745	HHGDL18	874845	or equal to $a + 14$ . Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of $a-b$ , where $a$ is any integer between 1 to 428 of SEQ ID NO:745, $b$ is an integer of 15 to 442, where both $a$ and $b$ correspond to the positions of nucleotide residues shown in SEQ ID NO:745, and where $b$ is greater than or equal to $a + 14$ .	AI738662, AW193278, AI459915, AA887962, AF107453, U07664, X56537
746	HOSMQ26	874847	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of $a-b$ , where $a$ is any integer between 1 to 1315 of SEQ ID NO:746, $b$ is an integer of 15 to 1329, where both $a$ and $b$ correspond to the positions of nucleotide residues shown in SEQ ID NO:746, and where $b$ is greater than or equal to $a + 14$ .	AI660037, AI299786, AA829747, H56186, AA352328, W38841, AI161351, AI148191, R96121, AA995008, AI193065, AI017193, H56403, AA379061, AA190904, AA904070, AA379060, AA075300, R96080, AA191311, AI439209, AA146764, AA146875, N92519, AA503807, AA649029, AI140061, AI379863, AI803876, AA577360, AA577361, D38550
747	HISDK89	874849	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of $a-b$ , where $a$ is any integer between 1 to 225 of SEQ ID NO:747, $b$ is an integer of 15 to 239, where both $a$ and $b$ correspond to the positions of nucleotide residues shown in SEQ ID NO:747, and where $b$ is greater than	AL031768

748	HLSAA22	874851	<p>or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1575 of SEQ ID NO:748, b is an integer of 15 to 1589, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:748, and where b is greater than or equal to <math>a + 14</math>.</p>	<p>AW452603, AI375427, AI202773, AI804097, AI500311, AI936889, AW090245, AA043900, AA025796, AI744559, AA644451, AW297895, AI143524, AI241966, AA644491, AI359599, AI939514, R49737, R37968, AA679698, AA025795, Z22968, Z22969, Z22971, Z22970, Y18390, AJ243816, Y18388, Y18389, AJ224687</p>
749	HFOXR45	874852	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 619 of SEQ ID NO:749, b is an integer of 15 to 633, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:749, and where b is greater than or equal to <math>a + 14</math>.</p>	<p>AA732106, AA522612, AI753227, AW021502, AI683772, AI084654, AI752575, AA913517, AA769955, AA721756, AI371200, AA948399, AA187208, AI627196, AA725797, AI879607, AI377473, AI371144, AI184958, AA609398, AW238518, AI031933, AI042581, AI090709, AA551957, AI347029, AI076805, AA994104, AI128467, AA605136, AI721175, N64728, AI093038, AA780778, AW009794, AW238474, AA000992, C75299, AI146705, AA572814, AA552148, AA554746, AA056992, AI262510, AI074220, W61162, AW238722, AA451895, AA552863, AI827340, N93164, AA805114, AA502630, AA047882, AW241184, AA468061, N75393, AI750255, AA724891, AA969850, H93295, AI186020, F37307, L44325, T07924, N22680, AI923732, W42592, AA468001, R68947, N95336, AI460024, AI266318, T50094, AA526649, W72244, AA133408, AI351303, R16108, AA852240, AA320739, R70096, F04400, AA468021, F27323, AI828393, AI424671, AI963007, AW088242, H78587, AA363539, H21918, AI984226, AI638566, AI949544, AI805471, AI620656, H78594, AI954065, AW342018, AW151573, AI984217, AI683719, AI811304, AI677978,</p>

	AI469666, AI872147, AW148849, AA807776, AI818583, AI369048, C21325, AI811169, AW169367, AW068194, AI888323, AI669314, AA005352, AI923242, AI587541, AW169722, AW090641, AI499642, H27583, AA320446, AI954136, AW020391, AA913080, AW193946, R98361, AA573557, AI917224, AA191725, AA057867, AA574024, H91709, T28335, W24359, AW380140, AI432915, AI289968, AW377772, W61228, AW078797, AA349251, R70046, R93092, H12474, AA568499, AW391241, N58906, AA491516, AI802056, H87977, AW195972, T29577, AW023843, AW168565, AI954481, AW393660, AW386924, D45657, W04892, H88158, AW389520, R25411, AW386947, AA053017, H27509, H64708, AI801167, AA362152, W76089, H21713, AI864857, AA361413, AA344218, H27597, AI446698, H93803, AI921746, AI567625, AI432570, AA908294, AI811912, AI699020, AL046942, AW088131, AI570966, AI702540, AI583578, AI744204, AI203903, AI865942, AI362537, AI471909, AW152415, AI862785, AI342023, AI683634, AI524179, AI469516, AW391254, AW265004, AI932638, AI049923, AI972170, AI571511, AI885982, AW088899, AW103628, AI473208, AI682891, AW080076, AI635528, AI224373, AI784253, AI274655, AW082532, AI799234, AI690813, AW117652, AI368579, AI270039, AW089932, AI924686, AW084353, AI687568, AW079315, AW104683, AI305745, AI886355, AI538850, AW087824, AW079706, AI624529, AW148685, AW194014, AI679990, AI950664, AI249946, AI3845, U01691, I07181, U05770, M18366, A07367, X12454, I33410, M19384, J03745, I07345, I07344, M21731, E01816, E14351, I08832, U92992, AL050172, U42031, S61953, AF047443, A86558, AF038847, AL137538, AL049466, AL136884, I42402, AL133067, E02221,

	U49908, AL080146, AF078844, AL096728, AF139986, X59414, X79812, AB007812, U96683, AL122110, Z72491, I09499, I66342, X83508, AR068466, AL110197, AR050959, AF067790, AL122050, AB025103, AF125949, AF158248, AL137268, U89906, I33392, AF030165, AL133081, AF038191, AF061795, AF151685, X54971, AL117435, E03671, AL049423, E01963, S68736, A27171, AL133061, X61399, X72889, X75295, AF040723, AL050170, AB031064, X66862, AF109683, AL122098, M27260, AF015958, AF002672, AF167995, AF153340, AL050024, AL137478, AF067420, AF132676, AF061836, AF159615, AF036268, U89295, AF119336, AL117587, AF126488, AF124728, X06146, AL133619, S77771, AF032666, U75378, AL133084, AL133557, U37359, I25049, AF044323, U75370, AF019298, AL080074, AL133665, AF114170, U02475, AF115392, AL137536, AL137554, AR060156, AL133075, AF090900, E12579, AF026008, U00686, AF040751, AL122118, AF180525, A21625, AF102578, X87224, AR038854, AF113019, Y18678, Y18680, AR029490, U83980, AF114818, E12580, A08912, AL133049, AR011880, A08910, A08911, AL110159, X63410, AL050015, A18777, AR020905, I89931, A08909, A65340, AF192557, E06743, AL137550, AR029580, AB019565, I49625, A08907, S83456, A65341, AF118070, A08908, X83544, AR068753, I25048, S79832, AL050138, AJ012755, AF022363, AF061943, S76508, AL035458, AL117635, A08913, AF120268, AL117460, AL117585, AB028451, L31396, X93328, X66975, L31397, AC002471, AC005374, AL022170, I89934, I29004, X66417, A15345, Y08769, AF013214, I30339, I30334, A83556, I18355, AL117626, Z82022, L13297, I34392, AJ005870, I48978, AL133014, AF106934, U72621, AL137294, AF081197, AF081195, AF113013, AB016226, E03348, AF017437, AF126247,

750	HWLOV52	874854	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 953 of SEQ ID NO:750, b is an integer of 15 to 967, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:750, and where b is greater than or equal to a + 14.</p>	<p>AL137557, U92068, X60786, AR019470, A77033, A77035, E03349, AF089818, A90844, I89947, AF111851, AF118092, AF183393, AF185614, U62966, AJ010277, A12297, AF000145, AF008439, AF182215, E12747, E15582, AB026995, U67958, X89102, E01812, AL137533, U78525, M64936, D16301, L30117, L44482</p>
751	HKCAA14	874855	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 681 of SEQ ID NO:751, b is an integer of 15 to 695, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	<p>AI885168, AA888053, AA526070, AI904928, AA526079, AI626102, AI990989, AI991953, AI335884, AI955194, N34316, AI904932, AI401049, AA552509, AI912336, AI090803, AI653454, AI285288, AI554150, AW361826, AI469648, AI888215, AI690777, AA916251, AA577010, AA595258, H30706, AI435882, AA837994, T36285, AI004435, AA480480, AI400085, AA293626, H53447, AA991155, AI287574, AA480481, AI869239, AI833056, R84598, AI769037, R85487, AA394121, AW081575, AI284876, AI673603, H53446, C15349, H38297, AW085042, AA336843, AA552555, AI721236, N44209, AW050853, AI934050, AA552171, C15673, AA292365, AA337307, R49981, AI582103, T03674, AI568122, AW001520, H28136, AA336805, AW301080, AW301098, AI419713, R89516, R47841, AW009642, AA687930, AI983880, AI220138, AA922388, AW137358, AA506059, AW362569, AI940058, AI940028, AI698863, R89519, R95454, M27444</p>

752	HMAMA0 2		NO:751, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 376 of SEQ ID NO:752, b is an integer of 15 to 390, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:752, and where b is greater than or equal to a + 14.	
753	HKABV02	874857	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 494 of SEQ ID NO:753, b is an integer of 15 to 508, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:753, and where b is greater than or equal to a + 14.	AI050715, AI868341, H04044, AI735282, AA315106, AA748069, AA778604, AA670061, F33750, AA044296, AA838724, AA865306, AA281640, AA523324, AA535136, AI360419, AI193427, AA994841, AI357495, AW131546, AA126719, AI015647, AI523059, AA887803, AI041265, AI023519, AI681516, AA554009, AA131586, AA458689, AI569655, AA334077, F27238, AA044123, AA879213, AA962758, AI371385, AI341538, AA976084, AA659914, AI002087, AI479801, AI354856, AW391885, AA358439, AI311108, W05652, AA720819, H77748, AA551303, R38305, AW303631, AW453073, AC006509, Z84480
754	HKGBD56	874858	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1148 of SEQ ID NO:754, b is an integer of 15 to 1162, where both a and b correspond to the positions of	AI948480, AA947922, AW027578, AA533072, AA442119, AI985820, AA122356, H04274, AA976703, AA482468, R53722, R78612, R67227, R78611, R37176, AA480651, AA363291, AI680596, H02979, AA807015, N67448, R52940, N66783, AA301771, AI345202, AI335480, Z41434, C03488, AA122320, AL041772, AI569328, AA857847, AI355849, AI619716, AI590227, AI282355, AA911767, AI491842, AI590575, AI537261, AW087534,

nucleotide residues shown in SEQ ID NO:754, and where b is greater than or equal to a + 14.	AI561356, AI560030, AI635464, AI634345, AI758270, AI439762, AA833760, AI472566, AW029611, AI524179, AA514684, AI538716, AI912434, AI540179, AI073952, AI590021, AI680221, AI582871, AI863382, AI921464, AI591040, AI868204, AI569975, AW149925, AI624950, AI961589, AI159837, AW193949, AA804860, AI863321, AI473451, AI818562, AI801592, AI654750, AI537303, AI669639, AI628316, AI367203, AI564719, AI365256, AI570989, AI567351, AI783861, AA804877, AI611743, AI886206, AI367210, AI634805, AI636719, AI619502, AW148320, AA504514, AI089970, AW243878, AI680498, AI273856, AA814782, AI249877, AI610690, AI799158, AI289863, AW148408, AW131294, AW170725, AA916033, AI368579, AI583065, AW190297, AW262983, AW263569, AW152182, AI273085, AW088560, AI567582, AW007309, AI269580, AW082623, AI309589, AW025412, AA937558, N99088, AL040011, AI539153, AI634467, AW078529, AI679179, AW151136, AI421903, AW072588, AW130430, AI633125, AI889818, AI597918, AW118496, AI890852, AI887163, AI241901, AW073865, AI333104, AI828731, AL036187, AI862139, AI439452, AW083175, AI536563, AI620056, AW075648, AA437338, AI446809, AI932739, AW089009, AI433157, AI702073, AI554821, AI434468, AW132104, AW104827, AI521799, AI249962, AI670009, AW188573, AL047187, AI590415, AI167353, AA908294, AW029401, AW051059, AW090086, AW105087, AI312542, AW189268, AI250848, AI684013, AW082532, AL037041, AI569583, AI919534, AI886415, AI830029, AW025279, AL036780, AI453322, AI095119, AW075519, AI682903,

	AI609196, AI955906, AI689470, AW087901, AI784214, AW194441, AI921753, AI367680, AW075381, AI247293, AI491775, AW087866, AW084117, AI560023, AI872154, AI886055, AI922707, AW167448, AI049669, AI677796, AI564144, AI624548, AW028033, AI598061, AW129230, AW026707, AI888621, AI281867, AI309306, AI284060, AI934052, AI865998, AI934026, AI419440, AI953393, AI286256, AL042440, AI799674, AW084447, AI376973, AI824648, AI932949, AI675052, AI445864, AI569945, AI566003, AW188539, AI536638, AI281412, AI828367, AI567993, AI804983, AI362248, AI432030, AA835966, AI671679, AI635045, AI273964, AI800440, AI624293, AI812080, AW090498, Y13350, AL035458, AF095901, I00734, AC004797, AL050155, AF185614, E00617, E00717, E00778, AL133557, AC005048, AC004883, AL031346, AC007172, AF113694, AL031281, AC005091, AF109905, I66342, AL137523, X56039, AF044221, AF182215, AC002471, AL034400, AL049426, I30339, I30334, AL080060, AF109906, AF042090, AC006112, AP000247, Z37987, AF113690, AC007298, U49908, AL133113, AC018767, AL035407, Z49258, AP000020, AF055917, AL049314, AJ001388, AL078630, AC004213, AC004987, AP000130, AP000208, AC006336, AF110520, AB026995, U79523, AL035587, X53587, AL133081, AL133636, AC005488, AC009233, AL049430, AL133637, AL050280, AC007392, AF061795, AF151685, AF078844, I26207, I33391, AL022170, Y00093, Z98036, AL050309, I89947, I48978, AC005156, AL122100, AC004878, AC006978, AC006115, Y10823, AC005876, AC005374, AC004690, AL031984, AC004093, AF130342, AC005291, AL050310, AF177767, I52013, AC004822, AC009286, AF118094, AC004383, AF150103,



755	HKACE03	874859	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1073 of SEQ ID NO:755, b is an integer of 15 to 1087, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:755, and where b is greater than or equal to a + 14.</p>	<p>AC006373, AC006453, AL132985, AF118092, AL137548, AF047716, A18777, AC004399, AC006313, AL122106, X84990, AL080126, AC004485, AL110197, AF016047, AC006501, AC004227, AF061981, AL080234, AL137550, AL022147, U35846, AR038854, AL080124, U95739, AF038847, X52128, AL133665, AF159615, I03321, AF090903, AB020777, D83032, AC009501, X81464, AL049557, AF065135, AC006222, AP000697, AF090886, Z13966, S77771, AF180525, AF179633, AL133098, Z99297, AC002287, AC007390, AL110296, S69510, AF040723, AC008067, AP000344, X82434, X62580, Z94277, AL137554, AJ238093, AF184965, AL117432, Z82206, AR053103, AF091512, AF003737, AL049300, AC004686, AF215669, AC005886, X59813, AC007748, A08913, AF094480, U37359, AL080140, AF090901, AC002457, AL137281, AF199027, AL034417, I89931, AC006561, AL050116, A08912</p>
756	HBIOR20	874864	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 789 of</p>	<p>AI125783, AI924555, AW299397, AI003778, AI084790, AI808326, AI276171, AI818222, AW411324, AI457598, AA777670, AI760566, AI275468, R40988, AW273161, AI042210, AA827440, AI673100, AA464847, AW189888, H22204, AA577244, H26725, AA635778, AI167416, AA570053, AW044195, H40445, AI381617, T91840, R39891, H40444, AW244125, AA877600, AA491735, AI874100, AI873071, AI264603, H26726, R87094, AW375363, T91926, R14470, R13596, H22153, R48422, AA470331, AA470347, AA468450, AA468277, AA468204</p>
			<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 789 of</p>	<p>AI205247, AI870039, AC005392</p>

757	HKEAA44	874865	SEQ ID NO:756, b is an integer of 15 to 803, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:756, and where b is greater than or equal to a + 14.  Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 782 of SEQ ID NO:757, b is an integer of 15 to 796, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:757, and where b is greater than or equal to a + 14.	AI201974, AA448789, AI640253, AC006153
758	HKLSA63	874866	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 321 of SEQ ID NO:758, b is an integer of 15 to 335, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:758, and where b is greater than or equal to a + 14.	
759	HKGCI22	874867	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1005 of	AI742925, AI750866, AI433675, AI310737, AI671307, AI750867, AW070696, AA486195, W01828, AI808060, AI631512, R91227, AI183930, AW179025, AW139735, N70774, AA516368, AW407800, R85255, AW069110, AW192002, AA631915, AA442431, AC005874, AF134471, AC007535, AP000547,

760	HOGDO85	874870	SEQ ID NO:759, b is an integer of 15 to 1019, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:759, and where b is greater than or equal to a + 14.  Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1490 of SEQ ID NO:760, b is an integer of 15 to 1504, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:760, and where b is greater than or equal to a + 14.	AL050307, AC004671, AL049843, AC009509, AC004890, AC005343, AL008710, AC004876, AC005681, AC005296, Z95114, AL132641, AF030933, Z83826, AC005839, AF001549  AA628522, AI494042, AI249716, AI091258, AI375095, AW300147, AI671479, AI083660, AA039683, AI695098, AW102750, AI281254, AI480349, AA922710, D80408, AA884219, AL134916, AL121296, AA516283, AA045618, AI436329, AA889419, AI978601, AA100470, AI187243, AA100371, AA856661, AA101452, AA041339, D80409, AA102694, R15445, AI914856, AA045655, AA100466, N56070, AA101461, AC006313
761	HLDX53	874871	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 799 of SEQ ID NO:761, b is an integer of 15 to 813, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:761, and where b is greater than or equal to a + 14.	AA628400, AI093204, AI991099, AA287786, AW009817, AA701864, AI272948, AI056972, AI243179, AI248098, AI307111, AA552168, T79840, AA652183, AA551685, H94082, AW276725, AI568808, AI382460, AA226928, R16826, AA502991, AI311519, AW020094, AW023111, AI311276, AI377161, AI345891, AA603359, AA655525, AA653300, AW021399, AI174930, AA601674, AA584125, AA595547, AA286836, AA829576, AA164946, AW103251, AI270019, AA551519, AI801505, AA054055, AL041375, R97239, AL036896, AI568088, N95424, AA581247, AI754293, AI732869, AA484164, AA832077, AI475297, AA584814, R96621, AI821987, AA669238, AA525331, AW275432, AA633762, AC006538, AF200465, AL031228, AP000031, S42653, AL034420, AC006046, U47924, AF196779, Z93017, AC004655, AC006512, AC004797, AL121603, AL021878, AC005399, U63721, AC005859, U91326,

	AC002553, AP000347, AC003111, D28126, AC005696, AC002425, U95739, AL035072, AC009731, U89335, L44140, AC002316, AC000025, AL096702, AC004139, AC004686, AC007216, AC005261, AL008731, AC007390, AC005067, AC005372, AP000547, AL049839, AC006027, AL078621, AL031005, AC006372, AC005730, AC005740, AC007283, AC005365, U80017, AC005874, AF134471, AL117337, AP000962, AC006261, AC005368, AP000213, AC003109, D86566, AL035405, AC004263, AL078581, AP000557, AL096763, AC005755, AC016831, AC004084, AC004771, AL035455, AC004890, AL021155, AC005562, AC007686, AL050318, AC006468, AL049692, AC005527, U52112, AL021391, AL031295, AC005736, AC004663, AP000135, D88270, AC005091, AC007731, AL031281, AC006285, AC005011, AC009247, AL021707, AC006071, AC007666, AL096712, AL121595, AC004922, Z93244, AC005500, AB023049, AC005412, AC002369, AC004030, AL031283, AC005944, AF017104, U95742, AC016026, AP000505, AC005544, AC004883, AP000556, AL049869, AC005071, AC005829, AC005081, AC005670, AP000116, AC004817, AC003956, AC004832, AP000300, AC002477, AC004382, AC005291, AC002326, AP000502, Z98048, AL031680, AL109627, AF111169, AC002472, AF141309, Z98950, AC004685, AL021917, AL021918, AC004887, AL121658, AC004000, AC007227, AC007151, AC000038, AC006449, AC005940, AC003110, AC006312, AL096791, AC003030, Z86090, AC005911, AC005146, AC005377, AL035587, AL049748, Z82190, AF205588, AC005932, AC004675, AF196972, AC005815, AL009031, AC007371, Z99916, AL035458, AC005156, AF134726, AL031311, AC005632, AC007971, AC005014, AC005280, AL022165, AF038458, AC007308, AB028893, Z81314,

762	HKAHJ56	874873	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1999 of SEQ ID NO:762, b is an integer of 15 to 2013, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:762, and where b is greater than or equal to a + 14.</p>	<p>AL022316, AC007993, AC004878, AC004477, AC004491, AC004955, AC005237, AC007225, Z68284, AL121652, AL035249, AC003029, AC002381, AC002091, M30688, L35532, AC003963, AC006014, AC016830, AC005512, AL022726, AC005089, AC004745, AC002115, AL022721, AC005015, AJ246003, AF015416, AL080243, AC004232, U78027, AC005529, AP000045, AP000113, AC005921, AC004858, AL009183, AC004262, AF030453, Z94721, AC006571, AC005924, Z83844, AC003950, AL034379, AB023048, Z83856, AF112484, AJ003147, AP000350, AC005778, AC004584, AF088219, AC004224, AL022326, AC007030</p> <p>AI936564, AI962435, AI201540, AI380214, AI961173, AI671158, AI566131, AI656491, AI433302, AI963189, AW135283, AW340593, AI590272, AI766176, AA772548, AI825187, AA434569, AI269941, AI969352, AA994820, AI186948, AI086149, AA913392, AI915883, AI675268, AI245795, AI168364, AW301722, AI057243, AW161652, T64438, AA689365, AI559552, AW160896, AI864281, AI700595, AW005608, AA312356, AW139160, AA913865, AA913409, AA913845, AW105064, AA161287, W52556, AA164728, AI679666, R73981, AW170061, H04457, AI224056, R82382, H04535, AA303834, AI381331, R82335, AA604090, T65708, AA318057, AA370674, AL046969, AI766991, N50963, W63609, AW275443, D63017, AI679094, AW080108, AW274528, AI686345, AA533067, AA747495, AW084257, AI860839, AA827714, AA804511, AA134133, AA932238, AI557808, AI540890, AI557602, AI557258, AL080122, AF151842</p> <p>AA722013, AW269033, AA069460, AA361633, AA721982, AA584616, AB022537, AL031228, AC011422, AC008041, AC004025, AL121654,</p>
763	HL1BL32	874875	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a</p>	

764	HLTHZ36	874876	nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 606 of SEQ ID NO:763, b is an integer of 15 to 620, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:763, and where b is greater than or equal to a + 14.	AC004125, AL022321, AL109613, Z82203, AC005969, U40455, AL009181, AC003960, AL008713, AC004038, AL049562, Z82975, Z83841, AC002463, AC004613, AC004079, U69730, AL031285, AC006039, AC006120, AL035423, AJ239329, Z94722, AC007527, AL035552, AC002479
765	HMEES39	874877	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1920 of SEQ ID NO:764, b is an integer of 15 to 1934, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:764, and where b is greater than or equal to a + 14.	AI767750, AI250810, AA130228, AW118751, N27857, AI651312, AI433165, AI401466, W93368, W94962, N40981, D61455, AA165269, T55132, AA847805, AI468845, H30324, AA532365, D60542, AI619882, H30262, H03885, AI763215, H03884, T55300, AI699580, AA249484, D60543, N44989, AA165270, AA130049
766	HMKAO9I	874879	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 145 of SEQ ID NO:765, b is an integer of 15 to 159, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:765, and where b is greater than or equal to a + 14.	AC006014, AC005488, AC005049
				AI215045, N23710, N23687, N23719, AI381455, AI904095, AC004660

767	HLYAQ21	874880	nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 422 of SEQ ID NO:766, b is an integer of 15 to 436, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:766, and where b is greater than or equal to a + 14.	AI569747, AI949603, AW339333, AI936776, AI569861, AI565736, AA524378, AI433718, AI814606, AA928109, AA936433, AI769436, AI460156, AI808131, AI912468, AI827392, AI954011, H45332, AI804892, AI810078, AI934934, AI948440, AI369739, AI857312, AI391669, AI201931, W99313, AI203680, W99402, AA902596, AI193161, AA720019, AW118160, AA775522, R73459, AA302680, R01177, N95276, AI566140, AA779115, AA902680, AA024608, H45264, AW086135, H45122, AI245112, AI537576, AI051627, AI423335, AA302679, AI361236, AA400362, AA400200, AW051133, AW235966, H51924, AI969071, W24551, AA884669, AI056332, R73458, AA024607, H51323, AW169844, AA631740, H45426, AI927808, R10129, R01289, W24513, C00041, N92332, AW014923, AA731391, AA829858, AI952175, AA805351, AW418796, AI380472, T82683, AA635748, R11097
768	HCRNL20	874881	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 738 of SEQ ID NO:767, b is an integer of 15 to 752, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:767, and where b is greater than or equal to a + 14.	AI692777, AA258408, AW297619, AI183378, AI474260, AI191464, AW297512, AW294313, AI478485, AW297408, AW297737, AW294130, AW296186, AI127691, AA057640, N24184, H99253, H51139, AI139365, AI351435, H99620, AA057388, AA034447, N20668, H85528, R67834, H01050, H89687, N25995, AA683489, H85429, AI970658, AA057680, AF022857, AF022858, AF022860, AF016098, AF022859, AF022855, AF022861,

769	HSYDX40	874885	nucleotide residues shown in SEQ ID NO:768, and where b is greater than or equal to a + 14.  Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1160 of SEQ ID NO:769, b is an integer of 15 to 1174, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:769, and where b is greater than or equal to a + 14.	AF022856, AF022854, AF016297  AI553878, AI582885, AA931164, X90541, AA628929, AW173048, AI609713, AI217596, AI079222, AI200872, AI200870, AI203632, AA687174, X90540, AA558961, N23581, AI264285, AA573065, AI393611, AA905973, AW020554, AA706045, AA287759, AA088176, AA481571, N98998, AA810417, AI345650, W24069, AA088606, AW370187, AW239122, AA287879, AI352261, AA996289, AW362844, T81660, AA290688, AI686379, W28498, AA334525, T93995, AI201809, AA354348, AI859184, AW406969, T93971, T81459, AI695585, AA938505, T93317, W84678, T93295, AI866401, AW370293, AA659812, AA938282, AA911428, AI261420, AI340666, AA045371, AI262921, AA046557, AA374218, W31229, AA749096, AA290946, AL035402, L20294, AF086166
770	HWLOQ11	874886	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2454 of SEQ ID NO:770, b is an integer of 15 to 2468, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:770, and where b is greater than or equal to a + 14.	AI961474, AW382909, AI923923, AI990751, AI813884, AA843844, AI301132, AI963119, AI935247, AI740608, AW361050, AI264633, AW196974, AW274440, AW237561, AW263591, AI566325, AI985954, AI890112, AI587310, AI986332, AI972620, AI968319, AI675856, AI033049, AI554274, AI922853, AI738691, AI342974, AI024422, AA947925, AI138813, AI867016, N25349, AW029458, AW276074, AW026634, AW007315, AA505889, AA906022, AA862214, AI797947, AA484620, AI888735, AI356599, AW365086, AI688404, N31464, AA307247, AW382877, AA491776, AA583862, AI000815, AA372018, AI289801, AA723582, H95976, AW392026, H95975, AW391990, AA223227, AA548574, AA330741, AA594055, AI686185, AW014082, H98886, R34321, AA301143, AI206620, AI524791, AI868801, AW273907, AI468354, AI689913, AI799367, R34204,



771	HMTAD91	874888	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1474 of SEQ ID NO:771, b is an integer of 15 to 1488, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:771, and where b is greater than or equal to a + 14.</p>	<p>AA573469, AA948211, AA577288, AW070462, T24686, AA773534, R35237, AI806231, AI367468</p> <p>AI961240, AA827821, AI718802, AI808413, AI572903, AA954259, AI379116, AW262991, AI141317, AA446001, AA419448, AW338468, AA150385, N66499, AW151742, AA279131, AW268151, AA421293, AI417463, AA295683, AA832485, AI088138, AA705264, AA329700, AA234839, AA150283, AA421397, AA147276, R28937, AA280142, AF129534, AF176703</p>
772	HOSF136	874889	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 533 of SEQ ID NO:772, b is an integer of 15 to 547, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:772, and where b is greater than or equal to a + 14.</p>	<p>AW189850, M62157, Z84488</p>
773	HHEYM94	874890	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1380 of SEQ ID NO:773, b is an integer of 15 to 1394, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	<p>AA203209, AA203201, AI346446, AI339822, AA515482, H68047, AW168943, AA781795, AI796057, AA548344, AA295127, AA879077</p>

774	HPWCL64	874891	NO:773, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 653 of SEQ ID NO:774, b is an integer of 15 to 667, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:774, and where b is greater than or equal to a + 14.	AA531009, AI803060, AW058661, AI871128, AI040865, AI635619, AA279688, AA314121, AA291325, AI300358, AI026031, AW136587, N48589, AI333491, AI217438, AA872204, AA313681, AA761900, AA825668, N62189, AI742355, AI167192, AA782249, AI472224, AI027048, AA969624, AA907863, R81199, AA279718, AA489085, AI356298, AA496950, AA490549, AI915658, AW242542, AA489150, H41907, F09870, AI809172, AW139442, AI346557, Z39110, AI346071, AI769499, AA948417, AI261341, AI818467, AI658736, AW328021, AW328022, AA936846, AA725007, AI949826, AA903934, AI240430, T65227, AI698620, AA805276, AW135001, N32423, AA077170, AI810090, AA094403, AI814548, AA070291, N56845, AA095591, T06057, AI884950, AA609881, AA635181, AF038969, AF038968, AF015553, AF038967, AF035737, Y14946, U77948, AC004883, AF043220, AF043219, AF017085, AL078475, AP000025, AP000026, AL050302, X53795, AL050379
775	HNTSQ62	874892	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1596 of SEQ ID NO:775, b is an integer of 15 to 1610, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:775, and where b is greater than or equal to a + 14.	AI686654, AI916713, AA714659, AW028133, AI989811, AI559512, AI718135, AA133016, AA310255, AI811558, AA071043, AA657616, AI872822, AI185995, AI191074, AI203138, AI434363, AA247842, AA568624, AA699378, AC002477
776	HRDDU54	874893	Preferably excluded from the present invention are one or more	AA115680, AB014519, EI5921, U36909, U38481, U58513

			<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 541 of SEQ ID NO:776, b is an integer of 15 to 555, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:776, and where b is greater than or equal to a + 14.</p>	
777	HRDBA25	874894	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 207 of SEQ ID NO:777, b is an integer of 15 to 221, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:777, and where b is greater than or equal to a + 14.</p>	
778	HSRAJ45	874895	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 746 of SEQ ID NO:778, b is an integer of 15 to 760, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:778, and where b is greater than or equal to a + 14.</p>	AA424352, AW297467, AI799462, AI873546
779	HSABG9I	874896	<p>Preferably excluded from the present invention are one or more</p>	AA374581, AC004134

780	HWLGN30	874897	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 551 of SEQ ID NO:779, b is an integer of 15 to 565, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:779, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1372 of SEQ ID NO:780, b is an integer of 15 to 1386, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:780, and where b is greater than or equal to a + 14.</p>	<p>AI378613, AI936922, AA393435, AA523055, N76957, AW245437, T65927, AA024907, W30993, N47472, H48414, AI565690, AW242692, AI754672, AI720930, AA216408, AI201612, AA555112, AW149614, AA487105, AA603088, AI332480, AI492883, AI094251, AA024908, AI276096, R74140, AI167579, AI673629, N98762, W02738, AI272819, N55572, AA416685, N47473, AI167581, AI092203, AA825149, AA916571, AI092758, AI248909, AI264776, AA987509, AA483520, AI277944, AI369766, AA693736, N72972, AI002124, W04419, AA229487, AI221121, AA338147, R08949, R98836, AA523795, AA534283, D45508, R74047, AA630266, AW057930, AI572755, AW083760, AA364768, AI433042, AI298399, R08842, T64500, AA416833, AA400759, AW168370, AA417902, AA704957, T63533, T63389, AL042536, AF020202</p>
781	HSPAL74	874898	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1215 of SEQ ID NO:781, b is an integer of 15 to 1229, where both a and b correspond to the positions of</p>	<p>AI928200, AI760547, AI971249, AI638520, AI742888, AI811634, AI082194, AI601147, AI126493, AI125498, AA968723, AA758168, AI168553, AI417681, AA527858, AW275317, C18986, AI868664, AI418768, AA972311, AA193457, Y15909</p>

782	HRDFM44	874899	nucleotide residues shown in SEQ ID NO:781, and where b is greater than or equal to a + 14.	
783	HCYBJ79	874900	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 333 of SEQ ID NO:782, b is an integer of 15 to 347, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:782, and where b is greater than or equal to a + 14.	AA378189, AA305464, AI061294, AL120389, AL120505, AA325521, AA077838, AI438956, AA767864, AA555085, H75272, AI382205, AC005823, AC007382, AF036938, AC004841, AC003982, Z85987, AC007899, AC006030, AC002365, L78770, AC004043, AC004458, AC002073, AC005036, AC003951, Z98048, AC005189, AL049569, AF121781, U53331, AL035249, AL031662, AC005519, AC004634, AC005264, AC005262, AC002378, AC004001, AC004230, AF024533, AC005088, AC006538, AF001549, AL022165, AC018633, AL049198, AL096803, AC005089, AC004212, AL050348, AB023050, AC008124, AC004770, AC004228, AP000512, AC007216, AL050318, AL024507, AL080243, AC005017, AL117257, Z93017, AL035417, AC005043, AL022326, AL139054, U07563, AC006509, AP000291
784	HSUBX76	874902	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a	AA745959, AW172736, AA292964, AA252386, AA234001, AA010065, AI160521, AI375953, AI375935, AW172922, AA419596, AI167445, AA526800, W92332, H91988, W15179, AW327300, AA397813, AI219021, AI858358, AA644467,

785	HNEAF57	874903	is any integer between 1 to 720 of SEQ ID NO:784, b is an integer of 15 to 734, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:784, and where b is greater than or equal to a + 14.	AA729539, W92388, AA729171, T29560, H89939, D19699, N78673, AA699807, AI021915, AA705174, AA705503, AA306157, R00665, AA234002, AL134394, AA305796, R94138, X54942
786	HWLRA09	874904	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1297 of SEQ ID NO:785, b is an integer of 15 to 1311, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:785, and where b is greater than or equal to a + 14.	AI338045, AW249380, W90044, R20623, N26338, W79482, W79626, AA931694, AW136308, AA478905, AW058071, R55686, AW182353, W87443, AA136405, W90000, T27099, AI767123, AI277412, AI282660, AA478787, W87306, R13502, AI193958, AA703389, AA136215, N46128, AA657536, W40494, T97614, W90244, AA081640, R55687, N31234, T27098, AI186810, C03423, AA663371, N36858, AI193351, AI244503, AI936229
787	HSUSB86	874905	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 619 of SEQ ID NO:786, b is an integer of 15 to 633, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:786, and where b is greater than or equal to a + 14.	AI014430, AW293893, AI765180, AA147335, AA976153, AA211147, R51494, AI188010, AL120688, AA995677, T25743
			Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 720 of SEQ ID NO:784, b is an integer of 15 to 734, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:784, and where b is greater than or equal to a + 14.	H14437, N42300, AA315244, D60676, AL133605, Z54952

788	HOSAK80	874906	<p>is any integer between 1 to 1003 of SEQ ID NO:787, b is an integer of 15 to 1017, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:787, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2704 of SEQ ID NO:788, b is an integer of 15 to 2718, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:788, and where b is greater than or equal to a + 14.</p>	<p>AW375533, AW391787, AA639599, AW009797, AA255695, AW391819, AA425619, AA618510, AL079748, AA262080, AW391788, AI469517, AW014143, AI187969, AW391814, AA102264, AA639406, AA627578, H65116, AI380427, U47707, AI866005, H65168, AI124709, AW390000, AA769199, T25163, AW391823, AW021256, AA093243, AA425438, AL079464, U30246, U13174, AF051561, U70138, AF071863, Z36839</p>
789	HE8TM43	874907	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2616 of SEQ ID NO:789, b is an integer of 15 to 2630, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:789, and where b is greater than or equal to a + 14.</p>	<p>AA394099, AW025523, AI765483, AA805363, AW299378, AW296409, AA548010, AI073822, AI127648, AA994971, AA417686, H42820, AA534227, AI538625, AI351805, AI636124, AW235552, AA600910, AI039515, AA905993, H45317, AA424496, H45253, AA079381, AI702324, AW104485, AI611096, H00586, AA398116, AI749404, AA337844, AA335661, AA335270, H00587, AA417569, AA535640, AA730664, N87954, AA894367, AI912434, AI619502, AI538716, AI569583, AI686808, AA531444, AI445611, AI564719, AW022209, AI636719, AL041772, AI677796, AI439762, AI680498, AI366900, AI828731, AW075413, AI863382, AI567351, AI699865, AA427700, AI537303, AI583065, AI630928, AI536574, AW149869, AI961589, AI633125, AI824648, AI524179, AW007309, AI580984, AI569328, AI872711,</p>

AI978703, AI799199, AI955906, AI818562, AI274759, AI249962, AW104724, AI469532, AI536638, AW087534, AI812107, AI590830, AI590021, AI491775, AI433590, AW148408, AI687728, AI560099, AW079159, AA449768, AI619716, AI886206, AW162071, AI590020, AI637584, AA833760, AI270183, AI590227, AI950892, AA225339, AI536685, AI597918, AI446511, AW089272, AI539808, AL045500, AL036802, AI554821, AI499393, AL038778, AI680221, AA572758, AW026882, AI620284, AI561356, AL036403, AI889306, AL036274, AI433157, AL121463, AI783504, AL079963, AI628205, AI824444, AW005858, AI871709, AI609331, AA804877, AI281762, AI445025, AI815232, AI500523, AI417790, AW152182, AI349645, AI247293, AI924971, AI435253, AW075667, AI826225, AW161579, AI476046, AI873731, AW020693, AI273839, AI925196, AI697137, AI921753, AW083175, AI612913, AA804860, AI309401, AI572787, AI340627, AW148320, AI432813, AL036631, AA911767, AW151136, AI678989, AL036396, AI613017, AI701074, AI824764, AL135661, AI862139, AI869367, AI648663, AI609580, AW029611, AI432969, AI492540, AI923357, AL036901, AI554344, AI610690, AW104827, AA640779, AL120853, AI634345, AI280747, AI271786, AI802542, AI624548, AW149311, AL048871, AW150578, AW301409, AI312428, AI634737, AI686877, AI445992, AL036736, AI445414, AA613907, AI954183, AI668893, AI537677, AI453322, AA938383, AI348897, AI282355, AI926790, AI581048, AI269862, AI886753, AI671679, AI520931, AI355849, AI499131, AW129106, AI274013, AI863321, AL036980,				
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				AW087445, AW102785, AI538829, AA641818, AI247193, AW084447, AI625079, AI475134, AL121365, AI520785, AI439089, AI499381, AI702073, AL119836, AI349772, AW188539, AL119863, AF049090, AF049089, I73428, U22321, I73429, I48978, AL049314, I89947, AF177401, AL117460, AF113690, I48979, AF106862, E03348, Y11254, A08916, AF078844, AL133080, AL117457, AL080060, AF146568, AF158248, AR011880, A08913, I89931, AF090896, AL096744, AL035458, AF113013, X82434, AF113694, AL133560, AL080124, I49625, AF113677, AJ000937, AL133016, L31396, AL050146, I66342, AL117394, L31397, AF090900, Y16645, AL122050, AL110225, U42766, AF113019, Y11587, AL133557, AF091084, AF090903, AL050155, AL137557, X70685, AJ238278, AL050116, AF125949, AL133565, S68736, E07108, AL049938, AL110196, AF079765, X63574, A08910, AF090943, AF113699, AF111851, AF090901, AL122093, AF090934, AF017437, A65341, AL050393, AF118070, AL049452, AL137459, AF017152, AF125948, AF113676, AL050277, AL137283, AL049466, AL133640, AJ242859, AR059958, AL133606, AB019565, S78214, AF104032, X72889, E03671, AL133075, U00763, A58524, A58523, AL110221, AL050149, AF015958, A08909, AF118064, AL117583, AL122098, AL050108, A93016, AF113691, AL049464, AF113689, AL117585, Y09972, AF097996, A77033, A77035, Z82022, AL137550, AL122121, AL122123, Y13350, X84990, AL080137, AL137527, AR034821, AF118094, E02349, AL049382, A12297, AL117435, AL110280, S61953, AL133093, AL137648, E07361, AL133113, U35846, U91329, AL049300, AL049430, AF183393, X65873, A65340, AL050024, S36676, A03736, AR038854, AL122110, AL050138, X96540, I33392, Z97214, AL133081, U86379, AL137533, AF061943, AL137538,

790	HTTBS45	874908	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 295 of SEQ ID NO:790, b is an integer of 15 to 309, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:790, and where b is greater than or equal to a + 14.</p>	<p>AL133619, AF182215, I03321, AL137271, AL137463, Z13966, U72620, AL080127, A07588, AL080159, M92439, AL049347, AL049339, I09360, E05822, U75932, U80742, X79812, AL137560, AF141289, AF199027, AL137521, AL049283, AL117587, AF118090, I17767, AF111849, X93495, AL137480, X98834, AL133665, AJ005690, AF111112, Z37987, AF030513, Y10655, X63162, AL110197, AL137574, X83508, A21103, AF087943, X80340, AF102578, I00734, AL133067, E06743, E00617, E00717, E00778, AF044323, AL137656, AL137488, E15569, AL133072, E01614, E13364, AF008439, S76508, AL133637, AF100931, AF067728, AL117626, I42402, AF192557, AF061795, AF151685, AL133077, AL133568, I32738, AJ012755, A15345, AR020905, A86558, Y10823, U73682, I30339, I30334, AL137530, AF200464, AF026124, I09499, U62966, E12747, AC004883, A18777, A08908, AF106697</p>
791	HLVA114	874909	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 626 of</p>	<p>AW006470, AI809971, AI005027, AI971424, AW015576, AI141772, AI140520, AA010174, AA010173, AI141581, AW024482, N26868, AW016555, AA553681, AA304914, N26867, AI139723, AA568551, AW072539, AI014473, AA828755, AA452572, AI344499, AA356459, AA978338, AA452752,</p>

792	HODFUI8	874912	SEQ ID NO:791, b is an integer of 15 to 640, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:791, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 576 of SEQ ID NO:792, b is an integer of 15 to 590, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:792, and where b is greater than or equal to a + 14.	AC005921	AI280360, AA377550, AA410530, AI859135, X76670
793	HTXCZ25	874914	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 445 of SEQ ID NO:793, b is an integer of 15 to 459, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:793, and where b is greater than or equal to a + 14.	AI634846	
794	HWD63	874917	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1650 of		AA707319, AI984804, AW439331, AI692489, W95024, AA134968, AI168588, AW167913, AI468003, AW449269, AW167911, AI201953, AI420291, AA699428, AI810666, AI567799, AI739319, AA916635, AI304435, AA680283, N74060, AA149660, AW169395, AI018710, AI801753, AA133567,

795	HWHHG74	874924	SEQ ID NO:794, b is an integer of 15 to 1664, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:794, and where b is greater than or equal to a + 14.	AA994034, AW248024, H83277, H51676, AA469069, AI247811, AW016006, AA904566, AA135049, AA337173, AI032568, H51090, AI364225, AI498396, AA337867, AI916393, AA007645, AI669871, AI191539, AA506356, AW247677, H83276, AI874026, AA007620, AA328273, AA372861, AA151875, AA911951, X97302, AC004477, X97298 AI670876, AI796528, AI458102, AA314165, AI743397, AA411006, AA307551, N42572, AW024150, AA888101, AA910251, AI653810, AA916542, AI673757, AA112396, AI309001, AI949161, W52827, AI307395, AI796361, AW205660, AA419531, N31842, AA502954, AA299577, AI129087, AA190345, AI269376, AA659084, AA190344, AA112395, AI369480, AW080195, AW024474, AI174335, AI280115, AI382520, AI942373, AA865803, X63507, D11330, X99685
796	HWLIE53	874925	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1915 of SEQ ID NO:795, b is an integer of 15 to 1929, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:795, and where b is greater than or equal to a + 14.	
797	HWLLR30	874926	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a	AI738580, AW272649, AI821214, AA858341, AA308610, AI732197, AA936503, AI807048, AA568897, AI911156, AA470673, AI915116, AW009320, AA527480, AW182922, T24589, AC005895, U15212, U51095

798	HLICA86	874927	is any integer between 1 to 1055 of SEQ ID NO:797, b is an integer of 15 to 1069, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:797, and where b is greater than or equal to a + 14.	AW410590, AW276747, AA507009, AI439654, AW029229, AI393401, AI433913, R60873, AW390652, N66981, H11940, C20715, AI138586, AJ243247, T54259, T54366, AI932865, AI432638, AI834273, AI918642, AI422665, AA872991, AA564642, AL049869, AL031728, AF109907, AC004841, AL035695, AC005914, AC005015, AC005531, AP000030, AL109623, AC004491, AC004659, AC005529, AC005189, AC003109, AC007192, AC005694, AC004216, AC005778, AC002470, AC003101, AL034429, U91323, AC005527, AC002350, AC003003, AL021154, AC004144, AC007308, AC005288, Z99128, AL031602, AP000212, AP000134, AC005837, AC007363, AL034554, U91318, AL031680, AC004263, AL022316, AC007688, AF196969, AL049874
799	HDPTI77	874928	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 855 of SEQ ID NO:798, b is an integer of 15 to 869, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:798, and where b is greater than or equal to a + 14.	AI798951, N45308, AI589356, AW080698, AA984122, AI475892, AI961689, AA552143, AI274347, AI365643, AI280847, AI024392, AI142759, AI699094, H19963, AW205803, AW207660, H19964, AA948497, AA813032, AW139889, AA025631, N54758, AW139887, AI081799, AI431413, Z44192, AW087258, AI202988, AI654604, AI739088, T55519, AW388380, AL079563
800	HWBDT18	874929	Preferably excluded from the present invention are one or more	AW444696, AI719301, AA832074, AI685148, AI336897, AI913393, AI738434, Z99419, W44411,

801	HWLMV6 2		<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1398 of SEQ ID NO:800, b is an integer of 15 to 1412, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:800, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 595 of SEQ ID NO:801, b is an integer of 15 to 609, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:801, and where b is greater than or equal to a + 14.</p>	<p>AW193034, AA694024, AA825655, AI221589, AI203245, N67470, AI927254, AI700836, AA993958, Z99418, AI862355, AI191028, AA730013, T23508, AW003365, AA058570, AI648383, AA879261, AA815061, AW137773, W69765, N52763, AA244319, AW444700, T67685, W45673, AL117608, AL117545</p>
802	H2MAC06	874931	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 946 of SEQ ID NO:802, b is an integer of 15 to 960, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:802, and where b is greater than or equal to a + 14.</p>	<p>AI718277, AI806204, AI922705, AA134958, AW189584, AW152541, AA911194, AA099689, H26598, AI523349, AI783469, C06405, AA856931, AW050657, AA650629, AA075317, AI535926, AC007750, I50896</p> <p>AA837575, AI750047, AI762213, AA528093, AI749649, AA514773, AA514789, AA421943, AA167440, AI708618, AA400973, AI474120, AA514874, AI283967, AA587027, AA167783, AA642930, AA878029, AW193324, AA857522, AI284506, AA164459, AA164458, AA838234, AA169874, W38398, AW276087, AW264913, AA148194, AA308126, AA148193, AA169614, AI669077, AA074902, AA079651, AW190644, AI306666, AA167439, AA857853, AA074845, AI199258, AA535642, AI826800, AA166792, AA074727, AA421944, AA165663, AA075896, AW265060, AA076140, AI626104, AA076188, AI541032, AA837890, N27757, AA102361, AA165649, AA100735,</p>

				AA524360, AI833071, AA593897, AI680515, AA573267, AA401137, AI675895, AA079557, AA506601, AW272215, AA076566, AA837854, AA515574, N79823, AA169569, AW364597, U47734, AA173827, AW150580, AA299459, AA298668, AI810491, AA076565, AI940001, AW062899, AW062852, AW062884, AA366738, AI797418, AA298242, AI939989, AW352267, AA503624, AW062699, AI559933, AI749194, AI866124, AA172395, AI697412, AI473481, AA502597, AA329732, AW270590, AW000856, AA471032, AA494293, AI695633, AA508677, AW176400, AA321220, AA165627, AW176422, AA564033, AW085635, T11089, AA076046, C14389, C14407, D80949, D80168, D59695, AI557751, D52291, AI535686, C14298, D59627, D51079, D81111, D51213, D80064, AW352172, C14227, AW360780, AA305578, D80290, D80268, D59503, AI557774, C06015, AA164975, D58246, T11417, D58101, D80258, D45273, AA612667, AW377661, AA809122, D51022, D80248, D81026, AW377669, AA514188, D80014, D80195, T03048, Z21582, C14077, C16955, D80302, F13647, D80522, D80045, D80228, C14331, D59484, D52059, T02974, D80269, N66429, D80166, D80212, D80038, AA514186, D59502, D57483, D59889, D80219, C05695, D80196, D80188, D50979, D80227, D80366, D59619, D80210, D80240, D80193, D58283, D80391, AI535961, D80022, D51423, D51799, D80253, D80043, D50995, D80439, Z33452, D81030, D59859, D59610, D59373, D59275, C14344, D59927, AA514184, C15076, D80164, D80247, X99133, X83006, AR014298, S75256, AR014294, AR016808, AR018138, AB010386, A84916, A62298, I82448, A82595, A62300, X64588, U37689, AF058696, AR008278, AB028859, I81198, I82446, AJ132110, AB019242, AR060385, A47134, AR008277,
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803	HTNAL08	874932	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 694 of SEQ ID NO:803, b is an integer of 15 to 708, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:803, and where b is greater than or equal to a + 14.</p>	<p>AR008281, I14842, AB002449, I79511, AR054175, AR060382, X72378 AI651652, AA384468</p>
804	HCQAM40	874933	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 574 of SEQ ID NO:804, b is an integer of 15 to 588, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:804, and where b is greater than or equal to a + 14.</p>	AI027215
805	HWLQA72	874934	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 670 of SEQ ID NO:805, b is an integer of 15 to 684, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	<p>AI650930, AI924794, AA505423, AI375468, AA547973, R12383, N33900, R96383, T80743, AW390137, AI264046, AI292085, AC008122</p>



806	H2LAD85	874936	<p>NO:805, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1190 of SEQ ID NO:806, b is an integer of 15 to 1204, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:806, and where b is greater than or equal to a + 14.</p>	AA313904, AA689381, W1916, AA902197, AA393734, N23500, AI890459, N56616, AW051533, N24997, W16484, H52633, AW022071, W25461, N41885, H53294, AA313388, W42529, N79351, T75271, W61213, F12959, AA993879, AL079496, AA084004, AA133565, T95141, T70377, N79169, R99979, T27956, AA588631, R24993, R08786, AA687406, N53211, AI001088, AI337572, AI027335, AA553960, AA923044, AA989228, AA810405, AA906035, AI143828, N47413, AI948420, W93532, AI189230, AI039643, W94199, AI148327, W94196, W93533, AA927653, AI356713, AI080553, AA055950, H52606, N78077, AI083913, R99983, AW179332, AW360811, T03269, D50979, AW377671, AW177440, D80522, C14389, D59275, AW178893, AA305409, D80439, AA305578, D58283, D59859, D80022, C14331, D80166, D80195, D59467, D51423, D59619, D80247, D80210, D51799, D80391, D80164, D80240, D80253, D80038, D80043, D59787, D80227, D59502, AW375405, D81030, D81026, D80269, C14014, D80212, D80268, D80366, D80196, D80188, D51022, D80219, D50995, D59927, AW378528, C15076, D57483, D59889, D80193, D80133, D80045, AW366296, AW178906, AW360817, D80157, AW179328, AW179020, T48593, AW375406, AW377676, AW378534, AW352171, AW377672, AW179023, AW178905, AW177731, AW178762, AW178754, AW179019, AW179024, AW378532, D80251, AW352117, AW360834, AW177456, C06015, AW352170, D51250, AW178986, AW178907, AW178908, AW179018, AI525923, AW367950, AW178914, AW178774, AW178781, AW378543, AW378540, D45260, AW179013, T03116, AW378533, AW378539, C03092, AW378525, AW352163, H67854, AA809122, H67866, T11417, X63469,
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807	HFKHNS9	874937	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1313 of SEQ ID NO:807, b is an integer of 15 to 1327, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:807, and where b is greater than or equal to a + 14.</p>	<p>S67861, AB028859, AJ132110, A84916, A623300, A62298, A82595, AR018138, AR008278, AF058696, I50126, I50132, I50128, I50133, AR060385, AB002449, AR016514, X67155, AR060138, A45456, Y09669, Y17188, A94995, D26022, A26615, AR052274, Y12724, A25909, AR066488, A67220, D89785, A78862, D34614, AR008443, A43192, A43190, AR038669, AR066487, A30438, Y17187, D88547, A63261, D50010, X82626, AR062872, A70867, I14842, AR054175, AR025207, AR016691, AR016690, U46128, AR008408, A64136, A68321, AR008277, AR008281, D13509, AR060133, X68127, AI921873, AA481200, AI304320, AI768165, AI379094, AA191002, AI334404, AI340330, AW009506, AW130057, AI378231, AI082016, AA609439, AI088167, AI568962, AI142785, AI935098, AI703118, AI082313, N33943, AI348241, AA191127, AI122896, AI281199, AI183348, AI074860, AA983647, AI340116, D20063, AA719027, H40196, AW024926, R66805, AA204702, D81776, AA377679, AI351943, AW367991, AA937537, H83669, AA810664, AI381182, H40158, Z40776, N98634, AI264512, AA933618, AI076753, Z45043, N49654, AI547252, AI572332, N79414, AC006011</p>
808	HWLRB64	874938	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 671 of SEQ ID NO:808, b is an integer of 15 to 685, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:808, and where b is greater than or equal to a + 14.</p>	<p>T06084, AL035703</p>

809	HWLQB30	874939	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 843 of SEQ ID NO:809, b is an integer of 15 to 857, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:809, and where b is greater than or equal to a + 14.</p>	AI871466, AI671845, AA195528, AA195413, AA495931, AI560767, AI379998, AI991515, AA973558, W02507, AI335857, AA576833, AA495932, AW297435, AI742592, AI824908, AI913877, AI819330, H62123, W25679, H61406, AW148964, AA573067, AA584360, AW404543, AA428270, N68677, AW025064, AI468971, AA578326, AA493546, AA214316, AA227802, AA330435, AI609984, AA568263, AL043095, AI433952, AA551062, AA715277, AW085751, T57562, AW192419, T62614, AA845690, AA524604, AA320642, AL046110, AA577706, AW072006, H77764, AW087537, AL042667, AL042670, AW057760, AA525807, AI610012, AA507745, AI609974, AA555232, AI267285, AI133609, AL134700, AA063419, AA147397, AI791659, AA515610, F08198, AA747491, AI547110, AA811451, AA768079, AW410409, AI927275, AA730872, T40342, R91049, H65404, AA679946, AL037653, AI986101, AA484321, AI003626, W02370, AI754926, AA515329, R21287, AL043285, AA021404, Z82201, AC006013, Z79488, AC003101, AL035454, AL033525, AC005074, AC004526, AL022237, U16300, Z83840, Z95115, AC004477, AC004792, AC006965, AC005856, AC005726, AL035659, AC002477, AC002504, AC004843, AL049613, AB004907, AC005257, AC009248, AC005206, AC005667, AL121580, AC005409, AL132992, AP000228, AC004066, AC005616, AC007845, AC000115, AP000140, AC005740, AL049843, AC005669, AF043233, U21936, AF154836, AC005303, AC005994, AC004893, AL035405, AC007021, AC000111, AC004921, AP000088, AC007226, AL023880, AL021392, AL135783, AC006101, AC004242, AC004985, AC001231, AC005755, AL049794, AF124523, AC002040, AC006251, U66062, AC000007, AF060911, AC005230, AL035690, AC007066,
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810	HWLRS70	874944	Preferably excluded from the	AC004033, AC005331, Z82190, AL050333, AL049636, AC005082, AL031667, Z83844, AC005874, AF134471, AL031602, AC003074, AL035552, AC006026, Z84466, AL117258, AC007227, AC003007, U80459, AL031846, AC000084, AF081795, AC005907, AC002306, AC004897, AL078593, AC005670, AL008723, AL049778, AC016025, AF023268, AL031427, AC005730, AC005971, AC004509, AL031255, AL049631, AL022316, AL020997, Z99128, AC002433, AC006064, U50871, AC002454, AF207550, Z97184, AC010205, AC008038, AC004662, Z97206, AC006211, AL049576, AC005696, Z97632, AC005520, AC004447, AL031775, AF165926, AC005368, AL035468, AC003004, AC004623, AL008632, AC006547, AP000511, AC006511, AL117340, AC005175, AP000555, AC007487, AC003110, AC000075, AC005828, AL136295, AC003682, AC005839, AL035460, AC004231, AC003038, AL050347, AC003969, AL132987, AC006536, AC002126, Z97630, AL009183, AR007118, AC007229, AL031058, AC006130, AC005663, AC002554, L42087, AL049777, AC004025, M81890, AF051976, AC007790, AF083655, U73634, AC002077, AC004611, AC004041, AP000065, AP000201, AC003042, AF124731, AC004968, AB023050, AP000097, AC005084, AL049775, AC005046, AL109809, AB006445, AF001552, AC005562, AC006261, AC005697, AC004699, AL035700, AL035400, AP000521, AL050308, AC007934, AL109952, Z95113, AC000118, AC005664, AC006162, AL049795, AF001550, AL050321, AL031291, AL034548, AC007919, L78810, AC005370, AC005358, AC004601, AP000688, AF001548, AC004496, AC004645, AC005049, AC005944, AC005058, AC006950, AC007676, AC005412, AC005004, AL008718, AC004000 T84952
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811	HWLRO68	874946	present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 277 of SEQ ID NO:810, b is an integer of 15 to 291, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:810, and where b is greater than or equal to a + 14.	AA134522, AA307072, AW062968, Z82216
812	HDLAZ62	874951	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 951 of SEQ ID NO:811, b is an integer of 15 to 965, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:811, and where b is greater than or equal to a + 14.	AW299730, AI479289, AA702805, AA128305, AI566742, AW192551, AW299787, AI459679, AI983099, AI679576, AI889230, AI399741, AA707181, AI478838, AI004255, AI028106, AI078326, AW299399, AW168845, AI680013, AI687323, AI805808, AI624570, AI193114, AA846943, AI476388, AI554160, AW193492, AI860582, AI088396, W31638, AA845559, AA862493, AA515889, AA127031, AI061081, AA126669, AA985263, AI650916, W15544, AA953324, AA525911, W42789, AI679592, AI187008, R76873, AA505452, AA004794, R99397, AI076257, AI640475, AW242583, AI589312, AI924475, AI245398, AW166735,

813	HCRPS91	874957	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 927 of SEQ ID NO:813, b is an integer of 15 to 941, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:813, and where b is greater than or equal to a + 14.</p>	<p>AI923561, H63003, AI879857, W42882, H00775, AA643547, AL047591, AA630199, AA370509, N68638, AG10614, AI889586, AI061082, H16903, H16793, AI089598, AI365007, AI632050, AI565433, R93003, AI873642, H56447, AA370320, T72401, AI935347, AI861861, AA371253, AI185613, AI565888, AA344469, AI275678, AA370319, D78808, R10966, AA005044, R58143, AI969207, AL047590, AA937865</p> <p>AI140748, AI436268, AI268329, AI081898, AI091086, AI768457, AW270940, AI037982, AI086419, AI041728, AI225119, AI091794, N94709, AA398844, N29912, AA435853, AI948979, AA455739, AI203758, AI263779, AI146500, N63448, AI521536, AL134542, AL119355, A81671</p>
814	HUVFU42	874958	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 3678 of SEQ ID NO:814, b is an integer of 15 to 3692, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:814, and where b is greater than or equal to a + 14.</p>	<p>AI815192, AI871597, AI924063, AW118638, AI651599, AI948612, AI445919, AI800981, AW151840, AI680400, AI346825, AI703149, AW337348, AI798582, AI583944, AW081121, AA905693, AA452482, AW365934, AI702971, W07423, AI021980, AA431908, AI018616, AI573080, AW073915, AA401069, AI677958, AI631163, AI401226, AI654388, AA443744, AI499641, AL039125, AA805196, AW004592, AI762590, AI094986, AA777241, AI222728, AW337273, AA987866, AI859056, AA909298, AA480196, AW009056, AI693828, AI285053, AI346854, AI694042, AA677363, AI076247, AW339620, AW191903, AA627929, AW242089, AA760806, AA401135, AI146552, AI089590, AW338249, AI469779, AI423414, AI268822, AI921359,</p>

	AI739374, AI343926, AI298969, AI219853, AI458220, AI961670, AI458271, AI761522, AW081629, AI694551, AA731544, AI654905, AW015400, AI474480, AA410622, W79206, AI632961, AA037869, AA151234, AI912767, W01469, AA557541, AA055499, W81328, AI536151, W78163, AI347767, AI079703, AA598704, AI140511, AA151235, N99244, AI636343, AI125306, AA054964, AA961018, AI304763, AA449339, AA533200, AW272847, AI866980, W81329, AA159320, AI587436, AI445795, AW152595, AI807730, AA928999, AW192175, AA055500, AI270626, AA296070, AL047460, AI299263, AI357497, AI051303, AA610459, N71284, AA573373, AA449596, AI424139, AI500427, R87565, AA062906, AI380967, H25317, AI304314, AI220037, AI223196, T68015, H52670, AA334272, W19687, T40960, N73730, AA904183, AI359433, R88290, AI446565, AA377114, AI621305, AW294279, AA782270, AW177746, AI280597, AA035720, H96235, C17439, R18416, AA370113, T68159, H25280, AW177724, AA343735, N90033, AI925799, T65301, H29776, AW177761, C18322, AW177729, N81082, AA602180, R42479, AA740926, AI566629, AI214694, AA342091, AA483635, AA834390, T27628, AW166730, AW268228, AA297206, AA630503, T66062, AA040935, AA366343, AW177726, AW169430, AW177711, F09803, T40037, AA295015, R25353, T94699, AA332630, H29777, D82697, AA235682, D82708, AW196082, F03396, AI825865, AI572754, AA370695, W03901, AI816591, T27365, D52341, AW299485, AI535812, AI420999, R26543, AA476794, N95783, D55624, F09809, F05771, F07118, AA443697, AA923572, D82645, D82699, AW177713, D55452, W21088, AA040934, H52671, H96769, W24897, AA092913, N58108, D82696, AI147279, H15856, H15859, D20617, AP001041, J04102, AF017257, X55181.

815	HDTAC50	874962	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1413 of SEQ ID NO:815, b is an integer of 15 to 1427, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:815, and where b is greater than or equal to a + 14.</p>	<p>AF057716, J04103, AP001040, X07202, M11922, X55373, M30137, AF053637</p> <p>AI950924, AA642196, AI080485, AI478751, AA26349, AI609117, AI956163, AW247487, AA877922, AI554307, AI811132, AI683584, AW439653, AW188385, AW440251, AI587348, AI872291, AA643336, AA829451, AW166828, AW273286, AA640940, AI951029, AI499331, AI719446, AW167280, AA857475, AW189169, AW338306, AW190062, AI701090, AW167363, AI625657, AA192298, AI885602, AA989458, AI951044, AA404740, AI590386, AI923592, AA654341, AI800385, AW081623, AI905436, AW245053, AA946942, AA664179, AA622218, AA621814, AA314409, AI911814, AA548371, AI887275, AA885759, AI678664, AA579768, AI160630, AI862999, AA622236, AW438827, AA613571, AA044589, AI905508, AA847530, AW328703, AI905507, AA404622, AA586737, AA115673, AA313655, AI653644, AA420595, AI381559, AI570293, AI538968, AI858693, AA204792, AA307774, AI690564, AA429358, AA428822, AI458804, AA826641, AI690516, AA429267, AA602877, AA552682, AW193316, AA640574, AI074397, AI627914, AI678740, AI289526, AI887213, AA420528, AI288272, AA577562, AA131105, AA315060, AA946716, AI884360, AI887604, AW247812, AW246052, AW247350, AI445012, AI888499, AI811027, AI887331, AA115613, AA838320, AA838791, AI610499, AA315942, AA610501, AI863020, AW241693, AA873061, AI446571, AI471290, AA837881, AA642931, AA587749, AA160618, AA314440, AA858181, AA420596, AI798293, AI690482, AI298807, AW245682, AA554027, AA978070, AA316886, AI198521, AI659658,</p>
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	AI758795, AI081837, AA130711, AA134072, AI537976, AA156469, AA130774, W45228, AI128855, AI431647, AI372012, AW182496, AA702833, AA115797, AW192168, AI567082, AA313433, AI355039, AA902819, AA307891, AA152041, AA954854, AA508843, AA315702, AI832207, AA075474, AI335645, AA428664, AA053587, AA313656, AA932530, AA160929, AA102231, AI579911, AI699052, AA553886, AA100702, AI129410, AW270116, AI358479, AA316210, AA007468, AA307393, AA115796, AI539743, AA826722, AA132800, AA164542, AA947155, AA224983, AA313627, AA152469, AA133627, AA075986, AA196273, AA132687, AW117645, AA640611, AA738107, AA053376, AA131161, AI352582, AI355111, AA534019, AW250998, AA827038, AA132233, AA857172, AA079300, AA134071, AA631699, AA088444, AW058218, AA314216, AA146738, AA654016, AA079346, AI290014, AI363723, AA134344, AA056424, AA316488, AI539063, AA434255, AA099895, AA642621, AA857786, AI613424, AI689077, T69467, AA132847, AA551537, AA156087, AI917998, AA526936, AA232405, AA134436, AA053143, AA131904, AA151713, AA308958, AI355780, T53412, AA534245, AA908735, AA130985, AA169563, AA627722, AA099374, AA707152, AA976426, AA132737, AA577558, AA129168, M26326, X12881, X12883, M26325, AL031685, M11686, M36376, AC006030, AL031585, AC004943, AL022333, AC008040, M24842, AC004033, AC005500, AC007731, Z84476, AL022068, AC002094, Z84488, AL031903, AC000094, AL049557, AL133249, AL121652, X12876, AL034348, AL035088, X81448, L32537, AL031119, D16975, U16815, D17142, T49424, T53358, T53411, T53426, T53774, T66002, T69875, T70521, T71454,

816	HWLWO0 6	874965	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 411 of SEQ ID NO:816, b is an integer of 15 to 425, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:816, and where b is greater than or equal to a + 14.</p>	<p>T91620, T91638, T75022, H04036, R98427, H67647, W40311, AA053609, AA053751, AA054246, AA055754, AA056373, AA070385, AA078748, AA079106, AA078998, AA079224, AA079272, AA079299, AA079301, AA079441, AA099924, AA099932, AA102143, AA102230, AA100661, AA101459, AA122380, AA121217, AA121598, AA126099, AA128232, AA129167, AA133673, AA134250, AA130336, AA134343, AA134426, AA130795, AA130942, AA132593, AA132780, AA146646, AA146737, AA147136, AA152468, AA152053, AA155704, AA158964, AA159256, AA165084, AA172216, AA173642, AA192395, AA196123, AA196124, AA232597, AA578009, N83382, N84687, N85451, N85530, N88625, C17207, AA095459, AA247762, AA248680, AA634585, AA775145, T11032</p> <p>AA148858, AW392670, AL119457, Z99396, AL119324, AW372827, AL119484, AL119319, AL119391, AW363220, AW384394, U46351, AL119355, AL119363, AL119497, AL037205, AL119522, AL119341, AL119483, AL119443, U46349, AL119439, AL119401, U46350, U46347, AL119418, U46341, AL119396, AL134525, AL119335, AL119444, AL119496, AL119399, AL042544, AL134536, U46346, AL043019, AL134533, AL043035, AL042614, AI142132, AL042984, AL042965, AL042975, AL134902, AL134538, U46345, AL042450, AL042542, AL134530, AL134519, AL043029, AL043003, AL042551, AL119464, AR066494, AR060234, A81671, AR054110, AB026436, AR069079</p>
817	HWLWP88	874970	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 361 of</p>	<p>AA127950, AA861271, AW149008, AA694087, AA694410, AA490237, R91259</p>

818	HWLHWI 9	874972	SEQ ID NO:817, b is an integer of 15 to 375, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:817, and where b is greater than or equal to a + 14.  Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1202 of SEQ ID NO:818, b is an integer of 15 to 1216, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:818, and where b is greater than or equal to a + 14.	AI521515, AW007430, AI583392, AA582844, AI446296, AI631292, AW008277, AW338183, AW130700, AI570875, AI610606, AA552696, AI740591, AI610189, AI214229, AI888885, AA715547, AA620385, AA315896, AI433937, AW008101, AW027816, AI346268, AI469394, AA936226, AI144349, AI278723, AA810391, AA315881, AI075026, AI274190, AI720812, AI304499, AW338763, AI819098, AW006673, AA745022, AI582486, AA730313, AA132642, AI358488, AA484064, AI886151, AA649280, AI803746, AW372991, AW372996, AW372997, AW028923, AA484878, AA715142, AA045699, AI682833, AW362691, AW362695, AW362733, AA576885, AI581761, AI918095, AA581843, AW006056, AI572709, AI347151, AA377007, AI431997, U47732, AA135215, AI027644, AI867535, AW363859, AI682856, AA135381, AI581943, AA515581, AI199246, AI590034, AI971090, AI597663, AA730839, AI186415, AI658616, T27588, AA146692, AI735766, AA746669, D25725, AW362673, AI868934, AI919583, AA146691, T10932, AA483386, AA515977, AI873184, AA045698, M35252  AW374058, AW374043, W84439, H98077, AA725816, W52869, AI926580, AI185775, AI360440, AI969941, AI718705, AA968470, AW002091, AW008856, AA047544, W67220, W91966, W52870, N47740, AA862294, W67288, AI610753, AA11874, AA471020, AA723203, D80637, W68493, AA625752, AL044614, H77377, H77376, AA745928, W25004, W69103,
819	HNTAI83	874973	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1290 of SEQ ID NO:819, b is an integer of	

820	HWLWS24	874974	<p>15 to 1304, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:819, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 980 of SEQ ID NO:820, b is an integer of 15 to 994, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:820, and where b is greater than or equal to a + 14.</p>	<p>AI127139, AA953939, AA908426, AA743114, W68358, AI913850, AI800072, AA535740, AI417080, N50135, AI439293, AI370639, W69102, AI277179, AI436715, AA883338, AA469058, N92824, AI200997, AA381324, AL044613, W94913, AI567418, AA328028, T81345, AI268678, T81520, AA973639, AA662178, AA662216</p> <p>AI650267, AI660992, AW450250, AI492051, AA557521, AW292631, AI830321, AI762011, F37656, AC004080, AF032095</p>
821	HWLWP62	874975	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 484 of SEQ ID NO:821, b is an integer of 15 to 498, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:821, and where b is greater than or equal to a + 14.</p>	AA627098
822	HOENV16	874976	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 782 of</p>	<p>AW006474, AI085578, AI671277, AI240723, D59927, D58283, D81030, D59619, D80210, D80240, D80195, D51423, D80219, D51799, D80253, D80188, D80391, D80212, D80227, D80196, D80193, D80043, D80038, D80366, D59889, D59467, D80022, D80045, C15076, D80166, D59275, F13647, T03269, C75259, C14014,</p>

<p>SEQ ID NO:822, b is an integer of 15 to 796, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:822, and where b is greater than or equal to a + 14.</p>	<p>D80378, D50995, D80134, D59610, D59502, C14429, D80241, D81026, D59859, D51250, D80164, D80949, D80269, D80268, D59787, D57483, D80168, D58253, C14227, D80024, D50979, D81111, C14331, D59695, AA285331, C14298, AI910186, C14389, D80522, D51060, AW178893, AA305409, AI557751, D51079, T11051, T11417, AW177440, AW179328, AW178775, D51022, D80014, AW378532, AW369651, Z21582, AI905856, AW352158, AW377671, D51097, AA305578, D80251, D80248, D80133, AW178762, D52291, AW177501, AW177511, D51213, D80064, D80247, AW360834, D59627, AA514188, C05695, AA514186, AW360811, AW352117, T02974, AW176467, AW378540, AW375405, AW366296, AW360844, AW360817, AW375406, AW378534, D80132, AW179332, AW377672, AW179023, AW178905, AW179220, D58101, AA815045, D80302, AA809122, D80439, AW378539, AW352171, AW377676, AW178906, AW352170, AW177731, AW178907, AW179019, AW179024, AW352163, AW177505, AW360841, AW179020, AW178909, AW177456, C06015, AW179329, D80258, AW178980, AW177733, AW378528, AW178908, AW178754, AW179018, T03116, AW352174, D80157, AW179004, AW178914, AW378525, D58246, AW367967, D51103, AW177728, D51759, AW178774, A62298, A62300, X67155, Y17188, A67220, A84916, A25909, D26022, D34614, X68127, AR025207, AJ132110, A78862, D89785, AR018138, AR064240, D88547, A85396, AB012117, AR066482, A85477, A86792, X82626, U87250, AF135125, I19525, X93549, AF058696, A30438, AR008278, A82595, A44171, A45456, AB028859, Y12724, A94995, AR008443, AB002449, Y17187, AR060385, U79457, S69292, I50126, I50132, I50128, I50133, AR066488, AR016514, A43601, U46128, AR060138, Y09669, A26615, AR052274, I18371, X89963, AR016691, AR016690,</p>
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823	HCRPM57	874977	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 489 of SEQ ID NO:823, b is an integer of 15 to 503, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:823, and where b is greater than or equal to a + 14.	AR008277, AR008281, AC002324, A43190, AR066487, A43192, AR038669, AR066490, AC005553, AR023705, D88507, I18367, D50010, S78798, AR051191, AB033111, I14842, AC005992, AR054175 AA825497, AI949225, AI887208, AI859408, AI039943, AI815044, AW173402, AI091417, AA973272, AI983724, AW085235, AA975595, AI955440, Z41491, AI701704, R37093, AI382320, F04902, F01893, AI370501, D51766, D51963, D51659, AI025786, AI359043, AI421512, D51907, AW078803, R01185, AA639573, AI920903, AW338398, AI762115, AA627807, F04223, F04224, AI220947, AA706251, T25385
824	HWLQT35	874978	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 574 of SEQ ID NO:824, b is an integer of 15 to 588, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:824, and where b is greater than or equal to a + 14.	AI356048, W68208, AA428201, T24766, AI024874, AI024852, AW392670, AL119324, AL119457, Z99396, AW372827, AW363220, AW384394, U46349, AL119355, AL119363, AL119319, AL119483, U46351, AL119443, AL134902, AL134536, AL119341, AL119484, AL119391, AL119335, AL119444, AL119497, AL134920, U46341, AL042984, AL042433, AI142131, AL042975, U46350, U46347, AL119464, AL119418, AL119401, AL134527, AL119522, AL042614, AL042965, AL037205, U46346, AL119396, AL119496, U46345, AL042551, AR066494, AR060234, A81671, AR054110, AB026436
825	HTWBQ51	874979	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 951 of SEQ ID NO:825, b is an integer of 15 to 965, where both a and b	AI823763, AA779670, AI818564, AA206016, N71243, AI913349, AI383954, AA989089, AA846832, AA421016, AA406475, N22202, AI016536, W80789, N23413, AA406515, AA406338, AA813757, Z39308, W80896, H05006, H06839, F02715, AA406380, N35200, T17418, F03202, F02873, R50799, R39953, R33488, AW080748, R40705, AI700034, AA121683, R02175, AC007159

826	HWLWS65	874980	<p>correspond to the positions of nucleotide residues shown in SEQ ID NO:825, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 440 of SEQ ID NO:826, b is an integer of 15 to 454, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:826, and where b is greater than or equal to a + 14.</p>	<p>AI275140, AI080170, AA872000, AA625899, AA921707, AI336614, AI041296, AA884341, C02010</p>
827	HCRQC24	874981	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 740 of SEQ ID NO:827, b is an integer of 15 to 754, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:827, and where b is greater than or equal to a + 14.</p>	<p>T78662, H19164, AA417995, AA476744, AA450244, AA418054, Z99396, AW392670, AW363220, AW384394, AL119457, AW372827, AL119355, AL119324, U46350, AL119497, AL119319, AL119341, AL119484, AL119363, AL119391, AL119443, U46351, U46349, AL036418, AL038837, AL119483, U46341, AL119522, AL119396, AL037051, AL119335, AL036725, AA631969, AL119496, AL119418, AL042433, U46347, AL119444, AL036858, U46346, AL037205, AL119401, AL134902, AL042614, AL119439, AL134528, U46345, AL042450, AL042965, AL042975, AL134533, AL119399, AL039074, AL036924, AL042984, AL134525, AL134536, AL134538, AL042970, AL042551, AI142131, AL042542, AL042544, AL043033, AL043019, AL038509, AL043029, AL119488, AL037085, AL037094, AL037526, AL043003, AL036196, AL037639, AL036190, AL119464, AL037082, AL036767, AL038520, AL037077, AL036774, AL036268, AL036651, AL038447, AL036998, AL038851, AL036733,</p>

828	HTFNM11	874983	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1423 of SEQ ID NO:828, b is an integer of 15 to 1437, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:828, and where b is greater than or equal to a + 14.</p>	AL037027, AL036679, AL037615, AL036191, AC006322, A81671, AR060234, AR066494, AR023813, AR064707, AR054110, AB026436, AR069079 AW074187, AA669462, AI917911, AW103106, AI355835, AW103377, AW340863, AI559161, AI479340, AW129494, AW148988, AW167281, AW269709, AW261980, AW087962, AI908429, AI923895, AI354339, AI927751, AW089825, AI744249, AW168120, AA868807, AI814764, AI985223, AW151176, AW273772, AA573808, AW029250, AI687458, AW084593, AW152335, AW268696, AW304937, AI635632, AW026080, AA577099, AI554825, AI670005, AI669620, AL046634, AI961413, AI538283, AW150201, AW190158, AW150248, AI457126, AW249579, AI908427, AW117983, AA810194, AW270751, AL036452, AA977560, AI124949, AI680216, AW247016, AA857352, AI982977, AW029202, AI559488, AW376460, AI954479, AI701913, AI632826, AW167333, AI248268, AI446794, AI446060, AW380204, AI349399, AA581982, AI682951, AI252802, AW440362, AW020045, AW008301, AI671051, AI289804, AA665980, AI568322, AW021675, AA173182, AW130142, AI026039, AI434635, AI911309, AI573003, AI446390, AA954930, AI984482, AI374618, AA181983, AI057274, AA179470, N21996, AA226708, AI278679, AI298496, AA446617, AI925510, AA974398, AI273198, AA226709, AA707299, AA121756, AA402954, AI921447, AI073691, AA768758, AI312203, AW392756, W45167, AW104776, AW392749, AA101668, AI359875, AA165148, AA101669, AW005848, AI952630, AI749014, AA643088, AW023539, AA829123, AI312505, AW385916, AW296777, AI307609, AA983206, AA187710, AI476692, AI340572, AA773607,
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L31396, L31397, AL122110, AF090900, A08912,  
 AF090901, AF090903, AL050116, AF104032,  
 AF078844, AF097996, AF111851, AJ012755,  
 AF113694, AF113019, I33392, AL137521, AF100931,  
 AL133557, AF026124, A03736, AF061943, AL049314,  
 AL117457, A77033, A77035, U42766, AF091084,  
 AJ000937, A58524, A58523, AL050277, X82434,  
 I26207, Y11254, AL133640, E02349, X72889,  
 AL133075, AR011880, AF113690, AL133067,  
 AL133080, AF087943, I48979, AL110221, AL133016,  
 AF113013, AF113677, S68736, AL050149, AL050146,  
 AL122093, X96540, AL137463, AL117583, AL137459,  
 AF125948, AF177401, AF090896, AL133113,  
 AF118094, A65340, A65341, AL050024, AJ242859,  
 AL117460, X93495, AL133072, AF079765, AL049464,  
 AL080060, AF090943, AL137557, X70685, AL137648,  
 AF183393, AL137538, Z37987, AF182215, AF026816,  
 U80742, AL050393, AL133565, AJ006417, M92439,  
 AR038854, AF090934, AL049938, AL117585,  
 AF113676, AL096744, E15569, AL050138, AL137480,  
 Y11587, AF118070, AL110196, AL049430, AF113699,  
 AL049382, I42402, AL137527, X65873, AL133606,  
 AL122123, Y10655, AF119337, E03348, AL122049,  
 AF113689, AL122050, X84990, A93350, E07108,  
 AL137533, AL137294, AL137429, AF162270,  
 AF017152, A12297, AL080159, AL080127, E08631,  
 AL117440, AF113691, X63574, AB019565, AL049300,  
 AF118064, AL137478, AF125949, AL117394, U91329,  
 AL137292, AL110280, AL137283, I09360, AL133093,  
 AF118090, AR059958, AL122098, Y09972, AL080137,  
 AL050092, AL122121, X98834, AC002287, E07361,  
 A93016, AF111112, L19437, AR000496, U39656,  
 AL122111, L30117, Y14314, AL133077, AL133014,  
 T52415, H29629, H40251, H40252, H42866, H89024,  
 H93634, N58661, W23630, W35220, W45470,  
 AA243082, AA469426, AA542859, AA564057,

829	HFIUG95	874984		<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 959 of SEQ ID NO:829, b is an integer of 15 to 973, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:829, and where b is greater than or equal to a + 14.</p>	<p>AA582806, AA631721, AA665064, AA804747, AA886009, AA879155, AA910665, C03238, AA642881, AA090857, AA485703, AA771820, T25411, T11007, D25940, D25930, T23921, F02372, AI270088, AI540420, AI540744, AI583046</p> <p>AI453137, AW340695, AA055348, R77985, AC007115</p>
830	HSRFC02	874985		<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 800 of SEQ ID NO:830, b is an integer of 15 to 814, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:830, and where b is greater than or equal to a + 14.</p>	<p>AL047872, AA406422, AA058677, AA214136, R57531, AI798347, AA213958, D87466</p>
831	HCRPC43	874989		<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 597 of SEQ ID NO:831, b is an integer of</p>	<p>AI290782, AI871066, AW137281, AA810408</p>

832	HMSPB24	874990	<p>15 to 611, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:831, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 574 of SEQ ID NO:832, b is an integer of 15 to 588, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:832, and where b is greater than or equal to a + 14.</p>	<p>AW378532, D44721, AA558814, A1114719, AA587516, AA584862, D34614, AC004134, AC007686, AL031289, AL049874, AC004024, AL133353, AC007227, AC005089, AC004895, AC007114, AC003043, AC004019, AC006050, AL132777, AC002094, AL122020, AC005099, AC005972, Z98884, AC005696, AC007216, AC006160, AC000052, U52111, AC005412, AC003010, AL022328, AL024507, AL031650, AC005914, AC004859, L44140, AL034429, AL049776, AF196971, AC006538, AC004242, AC005365, AC005602, AF064861, Z93930, AC005578, AF053356, AL080317, AC005088, AC000025, AC002565, AC004685, AC005876, AC004132, AC003074, AL109628, AC006312, AC022517, U91323, AC004854, AC005785, AC007666, AR000113, AC005519, AC007386, AP000512, AP000252, AL109627, Z84466, AL080243, AC002312, AC004815, AC004929, Z98946, U95090, AF030453, AC005747, A28005, AL139054, AC007055, AC009336, AF001550, AL021155, AC005049 N50355</p>
833	HWLW183	874991	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 422 of SEQ ID NO:833, b is an integer of 15 to 436, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:833, and where b is greater than or equal to a + 14.</p>	

834	HCQB118	874992	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1076 of SEQ ID NO:834, b is an integer of 15 to 1090, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:834, and where b is greater than or equal to a + 14.</p>	<p>AL045919, AA573761, AW188430, AI199276, AI828370, AA704757, AA536162, AI826890, AI889712, AI161261, AI926049, AI379842, AI582837, AI674148, AI300550, AW195939, AI272783, AW197994, AI567539, AA654159, AA171760, AA612729, AA172001, AA468860, T87025, AI308822, AI432499, AI864369, AL045918, AW166813, AI739207, AI286309, R83710, H57265, AA533033, AI497727, AW086291, AC009320, AF024533, AL031289, AC005520, AL022327, Z84497, AC003666, AL031774, AC005829, AC004638, AC002310, AC007216, AC006117, AC004526, AL022238, AL121603, AF205588, U95742, AL022240, U95740, AL117339, AC003101, AC007308, AC004841, AL020997</p>
835	HWMBE49	874993	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 946 of SEQ ID NO:835, b is an integer of 15 to 960, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:835, and where b is greater than or equal to a + 14.</p>	<p>AW242997, AW007803, AI446497, AW339160, AA025386, AW139969, AA043093, AA5833505, AI362355, AW005585, AI904496, AA026030, AW362151, AI866565, AI571422, AI537761, E14566, E14558, E14559</p>
836	HCRPH59	874994	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 436 of SEQ ID NO:836, b is an integer of 15 to 450, where both a and b correspond to the positions of</p>	<p>N73791, AA812058, AA565733, AA290629, AI291317, D56402, AA515350, W18186, AI053786, AI758582, AA614010, AA292003, AA564561, AA857296, AI216054, R92404, AA862230, AA297968, AI864260, AI979005, AA663966, AW337454, AI433247, R91232, AI890385, AI859834, T06828, W23546, T90884, N55273, AA584603, AI865213, AA121919, AA774019, AI151407, AA557486, AA318014, AA063139, AA371857, T90696, AA837256, F27999, AI114477,</p>

nucleotide residues shown in SEQ ID NO:836, and where b is greater than or equal to a + 14.	AA654262, AC006127, AC003101, AC006285, AC004841, AC005911, AL031670, AB023049, Z84466, AC005932, AL050307, AC008372, AC005546, U85195, AF001549, AE000658, AC005037, AC002425, AL035685, Y14768, AC005071, AC004125, AL096701, AC016025, AC005971, AC004526, AP000505, U07000, AL022322, AP000563, AL031846, Z93017, AL035683, AC006571, AC002378, AC005057, AL022476, U62293, AC002301, AC016027, AC005529, AC006251, AC005694, AC006210, AF129756, AC004675, AC004491, AL121653, AC005839, AL035659, AF030453, U47924, AC004382, AL021155, AC004834, AC005519, AC004217, AC006449, AF053356, AC004859, AC016830, AF047825, AC002400, AC005017, AC006132, AF088219, AC004216, AC002073, AC005088, AC004887, AP000350, AC007857, AC004815, AC003108, AP000689, AC007227, AC005081, AL035455, AL021707, Z95115, AC005412, AL031664, AC006509, AL031728, AC000035, AL034451, AC004821, AC002369, AC002477, AL109984, AC009516, AC004253, AL031311, AC005484, AC006965, AC002310, AL035072, AC022517, Z97053, AL022312, AL049872, AJ003147, AC002070, AC006271, AL132712, AL050318, AC005940, U82828, AL049829, AC005914, AC005015, AC005531, AF134726, AC002544, AC005225, AC005500, AC005069, AC005295, Z99716, AC005859, AP000512, AC005921, AC004106, AC005193, AC005695, AP001052, AL117354, AC002565, AP001053, AC004966, AC005231, AC005082, AP000688, AP000503, AL049759, AP000501, AC006511, AC007376, AC006241, AC004938, AC005520, AL109963, AC004602, AL034420, AC005003, AC003104, AC007041, AL031427, AD000092, AL034417, AC005331, AC008101, AC005832, AC002316, AC002558,
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837	HCRPJ86	874995	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1130 of SEQ ID NO:837, b is an integer of 15 to 1144, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:837, and where b is greater than or equal to a + 14.</p>	<p>AL021453, U91326, AL031662, AL031597, AC004707, AC005829, AC005736, AC007055, AC004084, AC005821, AC005527, AC005280, AP000212, AP000134, AL133353, AL080243, Z97054, Z98884, AC005089, AC004882, Z95116, AF196969, AL035249, AC005479, AL139054, AC007263, AC002352, AC006211, AC002395, AC005875, AC004832, AL008726, AP000347, AL031447, Z84484, AC002996, D84394, R50086</p>
838	HCRPH30	874996	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 260 of SEQ ID NO:838, b is an integer of 15 to 274, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:838, and where b is greater than or equal to a + 14.</p>	<p>W20092, AA045214, AI677860, AI143214, AI636820, AA045249, AA491378, AA505146, AA255801, AA978262, R42858, AI221282, AA844031, AA535882, AA256694, AI625350, AI630082, AA913852, N90432, AL031297</p> <p>AI306705, AW169604, AI554821, AW083572, AI961589, AW002362, AI868204, AI612885, AA983883, AI687568, AI345688, AI538116, AI690748, AW078606, AW168503, AI702073, AI470674, AI916419, AW090550, AW193467, N98597, AI648508, AI540382, AI631216, AW090393, AW191844, AI766348, AI590043, AI345612, AI568060, AI670009, AI798608, AI345415, AI932949, AI433157, AI569583, AI866469, H89138, AI434134, AW084869, AI568855, AI758309, AI564765, AI345416, AW087199, AI862144, AI914736, AI690948, AA641818, AI352326, AW102989, AW024793, AI926143, AI470648, AI567612, AI636585, AI584130, AI799674, AI814087, AI619662, AI284035, AI289310,</p>

AI799189, AA012905, AW152182, AL046466,  
AW162194, AI270707, AI633125, AI698391,  
AI538564, AI251221, AI811785, AI915291,  
AI826225, AW238688, AI475394, AI340982,  
AI434731, AI889189, AI651045, AI590423,  
AI354627, AI889323, AI697191, AI589267,  
AI468959, AI582966, AI241923, AI185767,  
AI500714, AI862825, AI583032, AI884318,  
AI638644, AI569975, AW089439, AW090013,  
AI569579, AI628325, AI520862, AW168663,  
AI890223, AI597758, AI281867, AW089006,  
AI659518, AI561356, AI561038, AL040694,  
AA872507, AI268320, AI564166, AI478639,  
AI627745, AI273112, AW089572, AI623746,  
AI699823, AI521005, AI949510, AI812107,  
AW161202, AI582912, AI702301, AW086082,  
AL037582, AL046595, AL037602, AI627988,  
AW022682, AI246319, AW163834, AI811644,  
AI587156, R41605, AI620866, AW002838, AW079119,  
AI635038, AI891031, AI921092, AL037030,  
AW130689, N29277, AW102821, AI832245, AI890507,  
AI619748, AI423105, AL046618, AI699764,  
AW059828, AI953817, AI269469, AI887389,  
AI537960, AI439601, AA056265, AW149026,  
AW193038, AI554186, AI637833, AI933992,  
AI540606, AI828412, AI540784, AW189301,  
AW081298, AI521560, AI702068, AW051088,  
AI539800, AI348917, AI921254, AL036980,  
AI309306, AI648408, AW129918, AI866082,  
AI917145, AI634805, AI635897, AW026087,  
AW170700, AI539667, AW167918, AI270295,  
AI471282, AI247193, AI361739, AI583578,  
AI349957, N29481, R32821, AI956086, AI537408,  
AI267185, AA814990, AI345005, AI587143,  
AI868163, AI627896, AI572787, AW081449,  
AI912477, AI564448, AI591025, AI573167,



	AI559287, AW054931, AI445115, AI799183, AI872423, AI824764, AW104836, AW263804, AI866798, AI683099, AI244148, AW105601, AI452556, AI818204, AI565128, AI917963, AW148895, W74529, AL036925, AI890806, AI349598, AL036664, AW075207, AI349256, AW118382, AI784252, AI277008, AI679321, AI580674, AW193911, AW102902, AI312152, AW198090, C16221, AI343037, AW269097, AI612750, AI961414, AI366900, AI830259, AI955906, AF183393, I89947, AR038854, AF159615, I48978, U58996, AL137558, A08916, A08913, A08912, A08910, A08909, AF153205, AL137476, A08908, S76508, AF115392, Z13966, AL023657, AL137480, I89931, Y10080, AF017790, AF090900, I49625, A52563, AF169154, X63410, AL049464, Z82022, U87620, AL050149, AI8777, AF139986, A15345, AF026816, AL080124, U75932, AL049339, A83556, I89934, U49434, U35846, AL122049, AL133558, AL080126, X82434, S78453, AF111851, AL117460, AF061981, A27171, AF061573, AF107847, AF111849, AL133557, AL049452, AL122100, A08907, AL137292, AL050170, AF115410, AF113019, Y10823, A77033, A77035, E01314, AL110171, Y10655, AF065135, U92068, L31396, U68387, AF015958, AF137367, E02221, L31397, Z97214, AF003737, AL049300, S36676, AF106697, AL050138, AF113691, S77771, I89944, AF026124, AL110225, U80742, AL133113, AL110280, AL050366, I48979, S75997, AF036941, AL117585, AL117394, AL110159, AL080159, X56039, I03321, AF158248, AF146568, AL117435, X72889, AL137276, AL137463, E02914, Y11587, AF051325, AF113699, AL137271, M30514, U57352, AL137656, AL133014, X93495, AL110222, E01573, E02319, A21103, AR020905, AF090934, AF113677, AJ000937, A08911, AL137530, X80340, AL117583, A93350, AL137574,

				AL137529, AL050116, AL137533, S68736, AF090896, I32738, X57961, AL050092, AL133619, AL050393, AL137641, AL133665, AL080163, A58524, A58523, AF162270, AL050015, X98066, AL050277, L19437, A07588, AF067728, AL137560, U95114, AL117416, U86379, AL117578, AF061795, AF090903, AF151685, AF125948, AF177401, AL137550, AF106657, AL137665, D83032, AC002467, A08915, AL049324, I80064, X79812, I33392, D89079, AL080074, AL133640, A76335, AL080154, AF000301, AL133075, A90832, AL080140, AL137488, AF000145, AL137479, Y08769, AL110218, I00734, S61953, AF113694, AF100781, I18355, AF017437, AF090943, I34392, AF118070, AF069506, AF141289, X63162, U53505, AL049466, E15324, X84990, S69510, AF205861, AL122045, E00617, E00717, E00778, AL050108, AF016271, AL137658, AF185576, S79832, AL080148, A12297, AR034821, X65873, AL137548, AL137521, AF022363, AF061943, E15569, AL137539, AR068751, AB016226, AL137283, AF113689, S63521, AF118064, AL050024, AL117587, X70685, AL049314, L30117, AL133098, AJ242859, I17767, AL137711, Y09972, E06743, Y14314, S83440, D16301, AL133010, U91329, AF032666, AF057300, AF008439, AF057299
839	HCRPH54	874997	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 438 of SEQ ID NO:839, b is an integer of 15 to 452, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:839, and where b is greater than or equal to a + 14.</p>	<p>AI755214, AI754567, AA773463, AI754105, AW406447, AI366993, AI278972, AW304805, AI984168, AI291439, AW272815, AI537995, AI355246, AI536858, AI130709, AI249688, AA828637, AW272640, AI814682, H73550, AW131356, AW148775, AA634991, AA488746, AI038304, AI674840, F27015, AI634187, AI569100, AA808875, AI499954, H71678, AI859438, AW072963, AA503168, AI623764, AI587583, AI587565, AW192599, AI053978, AA483606, AA489390, AI627917, T74524, AL041924, AW166808, AA483075, AI206841, AA570740, AA702637, T47138, AI004591, AI879951,</p>

	AA169245, AA626040, AI078409, AA714011, H91062, AW265688, AL037927, AI205181, AA455483, AI189682, AA488689, AI457313, H05940, AI278130, AI620992, AW191886, AL037910, AW105463, AL045077, AA568204, AI927275, AA714110, AA609834, AI371249, AI080307, AI890971, AA574442, AA642053, AA603413, AW263864, AI687343, H57988, AA601327, AI961983, AI862716, AI254779, AI417469, AA489240, AC005074, AC005057, Z84480, Z83838, AC002425, AL133245, AC006241, AC004531, AL049709, AL021407, AC008044, AL121652, AL109627, AC002347, AC005066, AC005409, AL031432, AC006153, AC007938, AC004801, AC005531, AC006312, AL050343, U96629, AC003042, AC005759, AC005412, AC005632, AC002394, AC002302, AC002472, AL034549, AL049779, AC003101, AL049830, AC016027, AC006236, AC006453, AC016830, AC005228, AP000557, AL031315, AP000689, AC005829, AC004230, AC007263, AC006196, AL049776, AC004682, AL020997, AF196969, AC007919, AP000349, AL121754, AC006121, AC000041, AC006023, AC007308, AC007731, AC007384, AC005500, AL031774, AC004983, AL121603, AL133448, AC005619, AP000113, AP000045, AC005764, AC004771, AC005247, AC005755, AC005920, AC002430, AC005940, AC005225, AC005288, AC007314, AL132987, AC006449, AC004228, AC006211, AC004821, AC005932, AP000694, AL031255, AC004685, AF139813, AC005089, AC007191, L77570, AC005747, AC005046, Z85986, AC005905, AC007055, L78833, AC004148, AC004491, AF003626, AC005971, AC005280, Z83822, AC005488, D87675, AC004792, AP000553, AC007161, AL049780, AF129756, AC005082, AL079342, AL096701, AP000555,

840	HCRPH69	874998	<p>AC004020, AC004812, AC008134, AC007283, AP000141, AC005837, AC005291, AP000009, AC004760, AL117258, AC007298, AL031680, AL080243, AL020993, AL079340, AC007285, AC001226, AC004605, AC004477, AF050154, AL021391, AC009516, AL031281, AF111168, AC002470, AC006162, AC003025, AC006285, AC002352, AC004819, AL035071, AC004084, L44140, AC003041, AL008729, AC004955, AC007999, AB014079, AC003982, AC005041, AL109952, AL031259, AL021920, AC005102, AF064861, AC004139, AC007845, AC007664, AL035587, AL022318, AL109628, AC004832, AC007325, AC005011, AP000514, AC004678, AL031311, U95740, AL031673, AC009247, AL022323, AC005899, AC004526, AC005567, AC004929, AL034429, AC006237, Z93017, Z93241, AF047825, AC007172, AF165926, AC004236, AP000030, Z86090, AC003962, AF124523, AL022324, AL035457, AC006958, AC006101, AP001053, AC002054, AC005261, AL032821, AC004662, AC006079, AC005911, AL031672, AC006486, AL049694, AL009181, AC008018, AC008132, AL109798, AC002554, AC006511, AC001558, AC006077, AP000066, AC004814, AL022326, AC004590, Z99716, Z46773, U62293, AC004797, AL117694, AL008635, AL133244, AC006120, AL049832, AC006239, AC010200, AC006315, AC004253, AC006115, AC010205, AC016025, Z83826, AC005015, AL008725, U91323, AC003071, AL031003, AC008372, AC006116, AC006530, AC012330, AC006111, AL031984, AF001550, AP000151, AC005537, AL031733, AC005914</p>
			H48009, R79892
			<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by</p>

841	HWLVX08	874999	the general formula of a-b, where a is any integer between 1 to 475 of SEQ ID NO:840, b is an integer of 15 to 489, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:840, and where b is greater than or equal to a + 14.	
842	HKLAA30	875001	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 450 of SEQ ID NO:841, b is an integer of 15 to 464, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:841, and where b is greater than or equal to a + 14.	AA089855, H30455, AA954657, AA455419
843	HWLVW5 <sub>9</sub>	875002	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 398 of SEQ ID NO:842, b is an integer of 15 to 412, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:842, and where b is greater than or equal to a + 14.	AA748900, AA283705, H56582, AC007436, AC006581

844	HWLJN18	875003	the general formula of a-b, where a is any integer between 1 to 551 of SEQ ID NO:843, b is an integer of 15 to 565, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:843, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 557 of SEQ ID NO:844, b is an integer of 15 to 571, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:844, and where b is greater than or equal to a + 14.	M94132, L21998	
845	HCROH01	875004	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 664 of SEQ ID NO:845, b is an integer of 15 to 678, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:845, and where b is greater than or equal to a + 14.	AA564247	
846	HCRPJ81	875005	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by	H50674, AC004067	

847	HETGS43	875007	<p>the general formula of a-b, where a is any integer between 1 to 338 of SEQ ID NO:846, b is an integer of 15 to 352, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:846, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 876 of SEQ ID NO:847, b is an integer of 15 to 890, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:847, and where b is greater than or equal to a + 14.</p>	<p>AI884928, AW299727, AW204926, AA933627, AI471959, AI860951, AA648384, AI674548, AW134703, AI817454, AI741288, AI801449, AW207053, AI927200, N70264, AI283846, AI360406, AI969837, AI359870, W57964, W57938, AI471951, AI928115, W79288, AI023464, AI824946, AA242781, AI479588, AI962494, AI246231, AA778582, AI094509, AI248982, AI093921, AA255447, AA242806, AA806316, AA962783, AI086106, AW440004, AI867514, AA143002, RI5486, AA256554, AA029757, AA973189, H01787, AA142852, AI277037, AA913805, AA581087, AI991436, AI766737, H01038, AI918290, N90613, AA758159, C00431, AA910879, AI640375, AI536574, AI571966, AW131402, AI553645, AW044561, AI565145, AFI14436</p>
848	HWLRS46	875008	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 577 of SEQ ID NO:848, b is an integer of 15 to 591, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:848, and where b is greater than or equal to a + 14.</p>	<p>AW139613, AW297258, AI016456, R96672, AI659051, AA114047, E15820, X16865, X08006, M24499, A20907, X07618, M33388, M33189, X07620, X16866, X07619, U38218, X58468, X58467, M33387, AL021878, D29822, X68481, X68013, AB008784, AB008785, AB031864, M22331, AB008424, J02868, Y16417, AB008425, U48219, U48220, AF221525, AB031863, AB004268, D17397, AB008422, M22328, X52029, X52028, M16654, J02867, AB031866, AB031865, M22329, J02869, M25143, AB008423, U20088, M22330, M27168, M23998, U21486, M23997, M16655, U20087, X52030, X52027, M24267, AF020345, M24264</p>

849	HWLRS57	875009	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 434 of SEQ ID NO:849, b is an integer of 15 to 448, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:849, and where b is greater than or equal to a + 14.	AW182141, AI580971, AA912442
850	HUSIO81	875011	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 522 of SEQ ID NO:850, b is an integer of 15 to 536, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:850, and where b is greater than or equal to a + 14.	AA887099, AA811742, AA527224, AA664284, AA315189, AA579403, AA846897, AI191233, W74477, AA846202, AA502502, AA314045, AA491654, AI707878, AA471090, AA397403, AA469287, AA507237, AI187101, AI332339, AA740204, AA747396, AA569585, F33217, AA654805, AA652514, AI879915, AA315986, AA525507, AA962834, AW020084, AA843742, AI969937, AA721769, AA729169, AA810361, AA843123, AA730331, W79076, AI334127, AA501492, AA493224, AW131319, AI185103, F32833, F25780, AI417031, AW081520, AW206794, AA516066, AA888378, AA102467, AL036301, W78097, AI355759, AA730608, AA657526, AI034125, AI433771, AI352442, AA993338, AI884979, AA569691, W79152, T27891, AA622677, AI708173, F30746, AA308473, AA843127, AA631879, AA243966, F33379, AA522595, AI817632, F24361, AI193696, AA244028, AA873154, AI735569, AA730517, F32900, AA747465, AA603382, AA649606, F20380, F32901, AA978146, F33416, F20454, AI422591, AA730660, AI290773, F25407, F33089, AI041257, AA888718, F33284, AA469367, AI762793, AI051903, AW022287, AA701472, AA614516, AA894458, R48278, AI749215, AA092308, AA384856,



			AA661946, F24070, AA541339, AA527626, R67767, F28009, AA740414, F21192, W02119, AA952978, F24293, N49678, F24612, AA527023, AA661512, F26558, AA541405, AI370965, AA995994, F34656, F18978, AI784087, AA325055, F26390, F37173, F35326, H88230, AI382368, F26165, AA890396, AA888357, AA522939, AA888273, AA385626, AI914990, AA662042, AA491592, AA649785, AA316500, F29972, F35844, H88231, AA639235, F31361, R48379, AA385380, AA729429, F28993, F24793, AA934536, AA559163, F29465, F35400, AA886837, F35383, AA658963, AI601217, F24186, AA664743, AA923674, N49780, F26281, AA933765, W32580, AA557502, AI919403, AA725198, AA580198, F29893, F35017, F26112, F29998, N88323, AA321318, AA999841, AA888348, AA887167, AA369038, F26491, AA355062, AA355061, F23510, T57396, F33201, AA523070, AA888349, AA363191, R96395, D20270, AI140448, T57332, AI383931, AA372960, F33956, AI735315, AA365118, F25283, F31096, N76644, AI000851, R57767, AA701577, AA680408, AI708904, AA701566, R96352, F26735, AW103366, T79616, AA705672, AI597752, AW150141, AA973003, AA659871, AA093673, H68818, T73331, AI473263, T73398, H54271, T79701, AA548584, H54272, F23543, N88025, AA659382, F36460, AA093536, N54563, N84370, AA327776, F30219, AA996251, AI391584, F30193, M22348, M26700, M26704, M26730, M26707, M26701, M26706, M37387 AA757114, AA758166, AA758973, AP000077, AC005011
851	HCRPF66	875017	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 369 of SEQ ID NO:851, b is an integer of</p>

852	HRMAF73	875018	<p>15 to 383, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:851, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 630 of SEQ ID NO:852, b is an integer of 15 to 644, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:852, and where b is greater than or equal to a + 14.</p>	D62892, D62760, D79755, AW444744, AW235233
853	HMSMR90	875019	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 513 of SEQ ID NO:853, b is an integer of 15 to 527, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:853, and where b is greater than or equal to a + 14.</p>	AA159605, AA805580, AA832269, AI955931, AI457764, AA908777, AI004292, AA953966, AA729173, AA525169, N67334, AA911328, AW172745, AL134840, AL135047, AI630932, AI469715, AF126488
854	HWLQM6 <sub>6</sub>	875020	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 499 of SEQ ID NO:854, b is an integer of</p>	AI949749, AW290908, AI459004, N33144, AA380990

855	HCRON47	875024	<p>15 to 513, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:854, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 420 of SEQ ID NO:855, b is an integer of 15 to 434, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:855, and where b is greater than or equal to a + 14.</p>	
856	HWLRV45	875025	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1418 of SEQ ID NO:856, b is an integer of 15 to 1432, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:856, and where b is greater than or equal to a + 14.</p> <p>AW016290, AW016291, AA429425, AI333326, AI368826, AI809630, AA428368, AI078821, AI949540, AI393461, AI039446, AI239582, H06842, F03182, H06841, C02196, W23702, AI571625</p>	
857	HFGAB06	875027	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1126 of SEQ ID NO:857, b is an integer of</p> <p>AW090205, AI690739, AI167504, AI140900, AI247649, AA010938, AI246303, AI554171, W01195, H93654, R98292, R98052, M78334, AF057036</p>	

858	HWLVA35	875029	<p>15 to 1140, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:857, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 518 of SEQ ID NO:858, b is an integer of 15 to 532, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:858, and where b is greater than or equal to a + 14.</p>	<p>AI935827, AW407220, AI720141, AA533138, AI934307, AA669840, AI246796, AI298710, AA311535, AI690379, AA599712, AI860423, AW275432, AI984168, AW270768, AI761677, AA581463, AW191886, AI064864, AA661583, AI291037, AA135761, AW270619, AA525753, AA502103, AA669238, AA904275, AW272815, AI038990, AI224583, AW419201, AA804726, AI798521, AI803809, AW272389, AW131001, AA584765, AA581903, AI150934, AL040054, AI004591, AA365586, AI696793, AA657835, AI609984, AI291268, AI291124, AL043719, AI379719, AW277196, AA653291, AI791659, AI797998, AI471481, AA655005, AL046409, AI028510, AW157005, AI571094, AW029038, AI915081, AA595661, H90845, AI587583, AI587565, AI610012, AL036282, AW008184, AA491814, AW020094, AA644090, AI039257, AI061313, AW151247, F02412, AI083998, AA992126, AA584493, AI609974, AL041894, AW074022, AW021399, AW151761, AI446464, AW162049, AA610381, AA425924, AW342042, AI929531, AF015416, AF190465, AC005102, AL021707, AC003667, AC004966, AP000116, AL009181, AC002477, Z83840, AB023048, Z96074, Z93017, AC005180, AP000309, AC005225, AL031321, AC003043, Z86090, AC004000, AC004797, AL049712, AC005399, AP000697, AC006125, AC004448, AL008726, AC005527, AC007151, AC004841, AC002996, AC006101, AC003070, AL096791, AC004263, AC007676, AL022326, AC005250, AC005703, AL033392,</p>
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AP000048, AP000501, AC006953, AJ011930, AL022327, AL035587, U78027, AC009516, AC005913, AL133448, AC004150, AL031602, AD000092, AC005529, AL023575, AC005358, AC006241, AL121603, AP000947, Z97876, AC006449, L78810, AC006254, AC006966, AC007225, Z82176, AC003102, AC005776, AC005484, AC018769, AC018767, U91321, AC005696, AC002316, AC007842, AC005839, AP001054, AC005940, AL031774, AC005971, AL021918, AC005740, AP000326, U52111, AC002073, AL049757, AC016026, AC004856, AC005921, U85195, AC004910, AL022320, AC008134, AL117329, AP000356, AL035086, AC005081, AL121655, AL023882, U52112, AC005048, AC004254, AL008718, AL109798, AC006597, AP000054, AP000169, Z98752, AC005668, AC016027, Z98051, AC005207, AE000658, AL035684, AC005251, AP000556, AC005632, AC005280, AC006530, AC005778, AC002563, AC007057, AC005841, AC004821, Z82195, AC005914, AC006121, AL117258, AC002312, AC002314, AC005082, AC006251, AD000812, AC018633, AL031311, AP000557, AC006441, AP000692, AC008018, AC007546, AL049874, AC002126, AF165926, Z95113, AC009247, AC005808, AL022237, X62355, AL033527, AC004854, AL049776, AC005031, AC004531, AC004814, AL049636, AP000552, U91326, AL049766, AC005015, AL022238, AC005412, AC006001, AC004963, AC007536, AF196779, AC007051, AP000502, AC004895, AC004922, AP000122, Z99943, AC006211, AP000500, AC010077, AC002544, AC016830, AC004913, AC004950, AP001068, AC007919, AC006511, AC004655, AL035659, AL022336, AC008085, AC005244, AC002504, Z93244, AC004835, AC004882, AC005553, AC016831, AF001548, AC006137, AL136295, AC003042, AL021808, AC005924, AC004084,				
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859	HCRPQ86	875032	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 377 of SEQ ID NO:859, b is an integer of 15 to 391, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:859, and where b is greater than or equal to a + 14.</p>	<p>AC005701, Z97056, AL049830, AL031427, U80017, AC007688, AC020663, AL049794, AC004466, AC004659, AC007686, AC005899, AC004815, AL035400, D87675, AC005361, AL031255, AC003685, AL035681, AC003665, AC006539, AC006076, AC007510, AL031447, AC005566, Z83822, AL035072, AC006468, AC005215, AL117339, AP000353, AC002546, AP000518, AC005874, AF134471, AC005191, AF207550, AC006132, AL035420, AF109907, AL133312, AL034549, AC004890, Z98950, AC005520, AP000348, AC007381, AC004804, AL021393, AC008101, D25754 AB014528</p>
860	HCROZ20	875034	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 553 of SEQ ID NO:860, b is an integer of 15 to 567, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:860, and where b is greater than or equal to a + 14.</p>	<p>AA631915, AI590404, AA632355, H47461, AI821342, AI798521, AI049999, AI003068, AI860423, AI342863, T03613, AI003391, AI350189, W02419, AI434103, AI076729, AA828840, C75332, AI813920, AI884404, AI828721, AA551548, AA630476, AA157876, AI039257, AI285493, AI567676, T10218, AW021674, AI572680, AA814719, AA598608, AW403177, AW440495, AW023975, H86399, AA468458, AI281622, AI183392, AW021847, AA197089, AA636077, AW131394, AA748071, AI571094, T03928, AI570067, AI242236, AA167656, AI744963, AI167715, AI280566, AI889177, AI312614,</p>

	AI254267, AA330549, AI370470, AA507623, AA847341, AW151848, R33588, AA937402, AW239465, AA694596, AI520984, AA019793, AI049845, AA558402, AA558716, AA129000, AI251024, AA470490, AL047405, AA135761, AW028376, M77888, AI733523, AI065031, T34066, N49298, AA493245, AA299221, AW272513, AI423034, AI419419, AA152398, AA493546, AI215720, AI376687, AA663579, AI860648, AI590111, AA629668, AI640905, AI708108, AI623364, AW152451, AA594090, F35684, H63173, AI221027, AA640104, W58735, AA587835, AA773560, W45215, AA533660, AA425283, AI446574, AA127048, AA126969, AA984891, AA635150, AI002861, AA523718, AI803824, AI802268, AI031759, AA084439, AI345256, AA362670, AI285651, N35135, AA595661, AI754926, AI753131, AI819419, AW020612, AA525156, AA467740, AI267285, AA600863, AI275631, AI354377, AW149241, AI749823, AI926876, AI143653, AL138262, AA127021, AW238242, AI702049, AI003474, AA046906, H29593, AI445699, AW157128, AI358505, AW069769, AF111167, AL132992, AL009179, AC002350, AC004999, AL034420, AC005575, AC005041, AP000133, AP000211, AC005632, AL035086, AC004887, AL035587, AC005821, AC005225, AC007055, AC003098, AC005920, AL031287, AL035089, AC004041, AC005105, AC005913, AL031670, AL080243, AC007686, AC003007, AP000556, AP000557, AC006285, AC006312, AC005071, AL137100, AL020997, AC006530, AC002430, AC004756, AC006468, AL121658, AC009516, AC007384, AC005015, AC005037, AC003013, AC007207, AC005033, AB023049, L47222, L44140, AP001053, AF052041, AJ011930, AF200465, AL009181, AC007227, AL034548, AC006057,

	AC004967, AC005514, Z85987, AC005695, AF095725, AC004386, AL049780, AC005089, AD000092, AC005480, AC006544, AC006539, AL031622, AL031296, K00650, AP000514, AC004263, AC008372, Z93017, AC005971, AC004783, L47229, U07561, AC002310, AF045555, AC005031, AL096791, AF019413, Z83820, AL021579, AC003080, Z85986, AL031767, AC003689, AC005972, AC004890, AC005562, L47227, AC005488, Z98044, AC004242, AC002558, AC004125, AP000512, Z92542, AC005412, AL021707, AC009399, AL049562, AC005914, AC005244, AC006511, AL049776, AL022163, AF053356, L81394, AC009247, AC000025, AC006013, Z96182, AL139054, AE000658, L47223, AC005837, AL033376, AL031432, AL022322, Z83844, AL079342, AC004804, AC004997, Z93241, Z96074, Z93023, U62317, AC002312, AC006139, AC005726, AL031848, AC005102, U85195, AC005911, AC006600, AC004812, AC004024, AC005585, AF001549, AC003684, AC004605, AL109984, AC005753, AL021546, AC005841, AC006441, AP000563, Z73420, U65896, Z95329, AC007066, AC007263, U80017, AL022476, Z82182, AP000289, AC005300, AC002316, AL049759, AC005081, AC005231, AL031281, AP000042, AP000110, AC005372, AF191214, AC006077, AB014079, AC002468, AP000555, AP000689, U62292, AL024474, AC003086, AC004851, AC002464, AC004844, AL035466, AC002110, AL022336, AL031121, AC009248, Z97056, AL049869, AC006014, AC007298, AC002306, AL096801, AC005058, AC006160, AF111169, AC002105, AL008716, AP000348, AC006958, AC006211, AC005907, AC002477, AB017602, AC005703, AC004183, AC006466, AC004534, AL110280, AC006261, AC006255, AL021878, AC004771, AL034421, AC001231, AP000553, AC004025, AC003037,



861	HFPKD18	875035	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 650 of SEQ ID NO:861, b is an integer of 15 to 664, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:861, and where b is greater than or equal to a + 14.</p>	<p>AL049694, AC001228, Z83846, AP000359, AC006137, AD000812, AC010205, AL022162, Z92544, U96629, AC005256, AC007277, AC003982, AL136130, AF075069, AC005899, AL031685, AC005754, AL022311, AL080239, AC005871</p> <p>AW051333, AA622259, AA554795, AA991784, AW025872, AI858715, AA181808, W42832, AI684307, AI634803, AA251829, AA262291, AA565240, AI309202, W42742, AW169519, AI376261, D63093, AI911554, AF132963, AF088034</p>
862	HCROSS9	875036	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 789 of SEQ ID NO:862, b is an integer of 15 to 803, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:862, and where b is greater than or equal to a + 14.</p>	<p>AA056144, AA057099, AA058794</p>
863	HCROR65	875037	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 619 of SEQ ID NO:863, b is an integer of</p>	<p>AI655430, AI867415, AI341310, AW365679, AA300470</p>

864	HZAAD77	875038	<p>15 to 633, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:863, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 493 of SEQ ID NO:864, b is an integer of 15 to 507, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:864, and where b is greater than or equal to a + 14.</p>	<p>N52760, AI128899, AI768926, AI744603, AI564516, AI088130, AI091999, AI126743, AI440521, AI309616, AI091062, AA505739, W58101, AI659933, AA703194, AW243135, W95022, AI633095, AA911079, AA935333, W93338, AA455097, AA894538, AA455075, N94437, AI094481, AI040514, N57581, AI674591, AI185938, AI340225, AI340227, AI375245, AI247839, R42767, H93246, AI830468, H93118, AA938302, AI140721, H87458, AI468684, AI268066, AW177625, AI032772, AA699860, AW449815, AA835970, AA211073, AA738097, AL042853, AI821062, AA653459, AL042753, AL049003, AI242505, AL138455, AL035847, W79740, AI640370, AI261589, AL120307, AI619665, AW089495, AI890887, AW243619, AA766268, AI687568, AL042440, AI493858, AL110402, AI684762, AI360195, AL047763, AI954721, AI673236, AI370322, AI440444, AI559752, AI539545, AI582871, AI570389, AA857969, AI677797, AL036638, AI089811, AI648699, AI471898, AI491842, AI499570, AW160916, AI584118, AW188390, AW029457, AI872072, AI580694, AI619691, AW148882, AI926593, AI628214, AI866573, AI446829, AW166561, AW104767, AI801536, AI918677, AI686690, AW026618, AI890051, AI590830, AI401697, AI355277, AW406745, AI804842, AI554283, AI572019, AI689096, AI886055, AI539541, AI885905, AI690813, AW089844, AI829977, AI648684, AI937869, AI610671, AL040528, AI452857, AI537516, AI434731, AW151451, AL040449,</p>
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865	HCRPA12	875042	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 290 of SEQ ID NO:865, b is an integer of 15 to 304, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:865, and where b is greater than or equal to a + 14.</p>	<p>AI224373, AI624475, AI590423, AW149219, AW084896, AI610318, AA587120, AL042694, AI590468, AI673140, AI628325, AW152195, AI784230, AA937566, AI539260, AI963212, AI274527, AI696583, AW105588, AI356470, AW021662, AI434656, AI565172, AI758942, AI345253, AF162270, AC006203, D83989, AC004213, AC000052, AC005902, AC006115, AP000130, AP000208, AP000247, AL031281, AC005156, AC002472, AL096776, AL035407, AL032822, AC004383, AC018767, L30117, AC006288, L78810, Z83840, AC006112, AC010077, AC009501, AL049557, AL035587, AC006336, AL021393, AC005886, AC002464, AC004989, AC007114, AL033521, AC006013, AC005411, AC004686, AC002564, AC004987, AC006501, AP000344, AL031274, AC005968, AL021391, AL034417, AF042090, AP000020, Z49258, AC007172, AC004837, AC007056, AC004485, AC009233, AC005291, Z98036, AL080239, U66059, AC004690, AC002531, AC000053, AC005048, U95739, AC005057, AP000458, AC007390, AL122021, AL079340, AL022147, AL030998, AL031295, AC004822, AC006222, AC009286, U89335, AC007392, AC007298, AC006371, AC002060, AC002086</p>
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866	HMEKZ86	875044	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1697 of SEQ ID NO:866, b is an integer of 15 to 1711, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:866, and where b is greater than or equal to a + 14.</p>	<p>AI379902, AI693726, N32566, AA994526, AW001744, AA629877, AI684883, AI052478, AI042114, AI080764, AA873011, N41907, W15500, AA993164, AI806284, AW241737, N89990, AA775897, AI381270, AA731618, AW450940, W19733, AI224466, AW183232</p>
867	HCRPR27	875045	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 553 of SEQ ID NO:867, b is an integer of 15 to 567, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:867, and where b is greater than or equal to a + 14.</p>	<p>AA393556, AA985381, AA757760, R25555, AA448483, F07499, AA526749, AI278605, AI344371, AI276855, AF002223, AL096711, AL109758, AL031599, AP000696, AC005908, AC007051, AC007919, AF069291, AF117829, AC002067, AC004413, AL023655, AC006296, AC006952, AC006249, AC008929, AC007677, AC007363, AC002457, AC006559, AC005518, AC007395, Z82201, AC006036, AF130342, AL050317, AC005048, AF027598, AC004079, AC005477, AC005045, AL021939, AC004998, Z82899, AC004087, Z68273, AL021069, AL109854, AP000694, AL034451, AC004659, AC009294, AC005015, AC011362, AL023713 AC007429</p>
868	HCRPQ46	875046	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 308 of SEQ ID NO:868, b is an integer of 15 to 322, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:868, and where b is greater than</p>	

869	HCRPN09	875047	or equal to $a + 14$ . Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of $a-b$ , where $a$ is any integer between 1 to 223 of SEQ ID NO:869, $b$ is an integer of 15 to 237, where both $a$ and $b$ correspond to the positions of nucleotide residues shown in SEQ ID NO:869, and where $b$ is greater than or equal to $a + 14$ .	Z93783
870	HCRPK03	875048	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of $a-b$ , where $a$ is any integer between 1 to 509 of SEQ ID NO:870, $b$ is an integer of 15 to 523, where both $a$ and $b$ correspond to the positions of nucleotide residues shown in SEQ ID NO:870, and where $b$ is greater than or equal to $a + 14$ .	N63026, N63032
871	HWLHY62	875049	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of $a-b$ , where $a$ is any integer between 1 to 1158 of SEQ ID NO:871, $b$ is an integer of 15 to 1172, where both $a$ and $b$ correspond to the positions of nucleotide residues shown in SEQ ID NO:871, and where $b$ is greater than	AW006935, AI304347, AI262522, N57535, AW006958, AW004749, F09394, Z41221, AI469565, AI261949, M79264, AI355473, AA345119, AA627647, AA594377, AI686451, AB018258

872	H2CBP44	875053	or equal to $a + 14$ . Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of $a-b$ , where $a$ is any integer between 1 to 497 of SEQ ID NO:872, $b$ is an integer of 15 to 511, where both $a$ and $b$ correspond to the positions of nucleotide residues shown in SEQ ID NO:872, and where $b$ is greater than or equal to $a + 14$ .	AA307892, AA327751
873	HCROW75	875055	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of $a-b$ , where $a$ is any integer between 1 to 450 of SEQ ID NO:873, $b$ is an integer of 15 to 464, where both $a$ and $b$ correspond to the positions of nucleotide residues shown in SEQ ID NO:873, and where $b$ is greater than or equal to $a + 14$ .	AC000065
874	HCROW65	875056	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of $a-b$ , where $a$ is any integer between 1 to 74 of SEQ ID NO:874, $b$ is an integer of 15 to 88, where both $a$ and $b$ correspond to the positions of nucleotide residues shown in SEQ ID NO:874, and where $b$ is greater than	

875	HPJCF45	875058	<p>or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 603 of SEQ ID NO:875, b is an integer of 15 to 617, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:875, and where b is greater than or equal to <math>a + 14</math>.</p>	AI052728, AA807217, AA907054, AA213896
876	HCRON87	875059	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 281 of SEQ ID NO:876, b is an integer of 15 to 295, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:876, and where b is greater than or equal to <math>a + 14</math>.</p>	
877	HIBEL82	875060	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 638 of SEQ ID NO:877, b is an integer of 15 to 652, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:877, and where b is greater than</p>	HI7282, AA351584, T80482, AF070610

878	HCRPE83	875061	<p>or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 417 of SEQ ID NO:878, b is an integer of 15 to 431, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:878, and where b is greater than or equal to <math>a + 14</math>.</p>	
879	HWLUQ22	875062	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 356 of SEQ ID NO:879, b is an integer of 15 to 370, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:879, and where b is greater than or equal to <math>a + 14</math>.</p>	<p>AI024672, AA679591, AI248626, AA887646, AF061056, AF084644, AF084645, AJ009937, AJ009936</p>
880	HCRPE63	875063	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 312 of SEQ ID NO:880, b is an integer of 15 to 326, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:880, and where b is greater than</p>	



881	HCRPE76	875066	<p>or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1301 of SEQ ID NO:881, b is an integer of 15 to 1315, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:881, and where b is greater than or equal to <math>a + 14</math>.</p>	<p>AW247760, H50138, AW368519, AA034259, AW246118, H49747, AW386985, AA325542, N79882, AA188766, W03099, AW206894, N72410, AA312511, AI880128, AI376296, AI075368, AA630709, AI769052, AA465622, AA536173, F27400, F37312, AA054418, AI124662, R19514, AF195951, X53744</p>
882	HCRPE44	875067	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 974 of SEQ ID NO:882, b is an integer of 15 to 988, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:882, and where b is greater than or equal to <math>a + 14</math>.</p>	<p>R24767, W23171</p>
883	HCRPE34	875068	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 426 of SEQ ID NO:883, b is an integer of 15 to 440, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:883, and where b is greater than</p>	

884	HE8QV20	875070	<p>or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 477 of SEQ ID NO:884, b is an integer of 15 to 491, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:884, and where b is greater than or equal to <math>a + 14</math>.</p>	<p>AA047308, R14147, AF089107, AF151354, AF104923, AF118270, AF156489, AC004851, AR048209</p>
885	HBIBQ89	875076	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 851 of SEQ ID NO:885, b is an integer of 15 to 865, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:885, and where b is greater than or equal to <math>a + 14</math>.</p>	<p>AA399613, F11248, Z42117, AA082253, F05395, T35421, AB007925</p>
886	HFAAD07	875080	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 992 of SEQ ID NO:886, b is an integer of 15 to 1006, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:886, and where b is greater than</p>	<p>AI887753, AI702451, AA548464, AI978680, AA071156, AA191693, AI797896, AI826052, AA041342, T62575, AW014334, AA197202, AI084270, AW375498, AA188647, AA602203, H20737, HI0377, T63199, R71297, AI829554, T62541, AI659397, R40856, AI868867, AI810306, T62616, AA602213, AI701277, AI221666, AA070862, AA860281, AA191265, D25992, AW363933, AI217112, AA528408, AI633390, AI199435, AB029036, AJ132948, AF119043, AL035410</p>

887	H2LAY41	875081	<p>or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 588 of SEQ ID NO:887, b is an integer of 15 to 602, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:887, and where b is greater than or equal to <math>a + 14</math>.</p>	AA315818, AA369878, AA191232, D58283, D80043, C14331, D80022, D59610, D59859, D80188, D80166, D80195, D50979, D81030, D51423, D59619, D80210, D51799, D80391, D80164, D59275, D80240, D80253, D59787, D80227, D59502, D80212, C14389, D80196, D80219, D59467, D57483, D59927, D80269, D80241, D80366, D80038, C15076, D59889, D80193, D50995, D80024, AA305409, C14429, D80378, D80045, T03269, AW178893, D51060, C75259, C14014, D51022, AW179328, AW178775, D80134, D80522, D52291, D81026, AW177440, AA305578, AW378532, D51250, AW352158, F13647, AW369651, D80168, D80251, D58253, D80248, AW178762, AA514188, C14227, Z21582, D81111, D80133, C14407, AW177501, AI910186, AW177511, AA514186, AW360811, C14298, D80064, AW378540, AI905856, C05695, AW352117, AW176467, AW375405, D80132, AW377671, D80268, AW366296, AW360844, AW360817, AW375406, AW378534, AW179332, AW377672, AW179023, AW178905, AW179024, D80247, AA285331, AW360834, D51097, AW352170, AW179020, D80302, AW177456, AW352171, AW377676, D80439, AI557751, AW178906, AW177731, AW177505, AW178907, AW178754, AW179019, D59373, T11417, AW178980, AW360841, AW178909, AW179004, AW179329, AW179012, AW177733, AW378528, AW179007, AW178908, AW179018, AW178971, AW179220, AW177714, AW352174, C14077, AW178914, AW378525, D51103, AW367967, D80014, D80157, AW177722, AW178983, AW177728, D51759, AW352120, AW179009, AW178774, AW178781, AW178911, AW378543, AW352163, D58246, T03116, D59503, T48593, C06015, D58101, D59627, D80258, AI557774, AW177723, D59653, H67866, D45260, C14975, AI535850, T02974, AW378533, AW378539, C03092,
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888	HDPIG12	875088	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 786 of SEQ ID NO:888, b is an integer of 15 to 800, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	AA0809122, AW367950, D51213, AW178986, D51231, H67854, AW177508, D60010, AW177497, AI525923, C14344, AW177734, D45273, AI525917, D59317, C14973, AI525235, D51221, D59474, C14046, AI535961, C14957, AI525920, AA514184, AI535686, D59551, AI525227, C16955, H67858, D60214, T03048, AW179013, AW178759, Z33452, AI525912, AI525242, AW378542, AI525925, AI525215, C05763, AI525222, Y15908, Y15909, AJ132110, A62300, A84916, A62298, AR018138, X67155, Y17188, D26022, A25909, A67220, D89785, A78862, D34614, AF058696, AR008278, AB028859, D88547, X82626, AR025207, Y12724, AB012117, Z86061, AR066482, A82595, X68127, A94995, A85396, AR060385, A44171, AB002449, AR008443, A85477, I19525, A86792, AR016808, U87250, X93549, I50126, I50132, I50128, I50133, AR066488, AR016514, AR060138, A45456, A26615, AR052274, Y09669, A43192, A43190, AR038669, AR066490, AR066487, AR054175, A30438, I18367, D88507, I14842, D50010, Y17187, AF135125, A70867, A63261, AR008277, AR008281, AR008408, AR062872, AR016691, AR016690, U46128, D13509, AB033111, A64136, A68321, AR060133, I79511, AR064240, U87247, AB023656, U79457, AF123263, AR032065, X93535, AR008382 W22252, T23206, AL031673, AL049942
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889	HMVCZ67	875092	NO:888, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 373 of SEQ ID NO:889, b is an integer of 15 to 387, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:889, and where b is greater than or equal to a + 14.	
890	HWLRF06	875093	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 371 of SEQ ID NO:890, b is an integer of 15 to 385, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:890, and where b is greater than or equal to a + 14.	D63997
891	HTNBJ90	875094	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 434 of SEQ ID NO:891, b is an integer of 15 to 448, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID	AA385073, AL042522, AL042491, AC005498, AC007228, AC004696

892	HWLUZ75	875099	NO:891, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 322 of SEQ ID NO:892, b is an integer of 15 to 336, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:892, and where b is greater than or equal to a + 14.	AL119376, AL119432, AL119400
893	HDTBD43	875100	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1541 of SEQ ID NO:893, b is an integer of 15 to 1555, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:893, and where b is greater than or equal to a + 14.	AI125852, AW242884, AA287541, AI861888, AW273349, AI653868, AI291447, AI273656, AA259012, AA768384, AW168996, AA971763, H98861, AI673304, AA812179, AA768837, AI969035, R70005, AW194279, AW194169, AA811579, AA224362, AA502756, AI824504, AI698788, AW016752, AI669850, AW087456, AA326934, AA326933, AA361600, AC006291, AC005188, AF028722
894	HWLUG07	875101	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 729 of SEQ ID NO:894, b is an integer of 15 to 743, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID	AA768384, AI861888, AI291447, AI653868, AW273349, AI273656, AW242884, AW168996, AA971763, AI673304, R70005, AA768837, AI969035, AA812179, AW194169, AA287541, AA811579, AA224362, AA502756, AI824504, AW016752, AI698788, AI669850, AA361600, AL119457, AL119399, AL119324, AL042968, AL042973, AL119443, U46341, AW392670, AW372827, Z99396, AL134920, AW363220, AW384394, U46349, AL119444, AL042965, AL119363, AL119319, U46351, AL119497,

895	HCRPV30	875102	NO:894, and where b is greater than or equal to a + 14.	AL042850, U46350, AL119464, AL119483, AL119484, AL119341, AL119391, AL119355, AA224099, U46347, AL119496, AL119418, U46346, AL042978, AL119335, AL037205, AL119522, AL119396, AL119439, AL134528, AL134518, AL079687, AF028722, AR060234, AC005188, A81671, AR066494, AC006291, AB026436, AR054110, AR069079
896	HTPHV54	875103	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 144 of SEQ ID NO:895, b is an integer of 15 to 158, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:895, and where b is greater than or equal to a + 14.	AI910846
897	HWLMY3 0	875105	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 319 of SEQ ID NO:896, b is an integer of 15 to 333, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:896, and where b is greater than or equal to a + 14.	AI393962

898	HTTFJ81	875106	is any integer between 1 to 682 of SEQ ID NO:897, b is an integer of 15 to 696, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:897, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 436 of SEQ ID NO:898, b is an integer of 15 to 450, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:898, and where b is greater than or equal to a + 14.	R12155, AC005971	
899	HDPCC41	875110	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 813 of SEQ ID NO:899, b is an integer of 15 to 827, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:899, and where b is greater than or equal to a + 14.	AA639560, Z57050	
900	HINAA28	875113	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a	AW089799, AI338829, AI382007, AI084708, AI382947, T19791, AL044125, AL134524, AL041347, AL040193, AL043496, AL044162, AL041324, AL043538, AL040621, AL041098, AL047012, AL040463, AL047219, AL047170, AL040322,	



901	HTEBS63	875114	<p>is any integer between 1 to 741 of SEQ ID NO:900, b is an integer of 15 to 755, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:900, and where b is greater than or equal to a + 14.</p>	AL041133, AL041238, AL040625, AL040510, AL040119, AL043467, AL044186, AL044037, AL040617, AL045684, AL043677, AL040839, AL041752, AL043492, AL041602, AL037436, AL038838, AL041168, AL044074, AL041635, AL040294, AL041730, AL041523, AL043627, AL037443, AL041374, AL043845, AL044064, AL044272, AL038983, AL043923, AL043814, AL043848, AL037435, AL041459, AL043570, AL037343, AL040052, AL041577, AL046850, AL038532, AL040768, AL037727, AL044258, AL040464, AL046994, AL047183, AL046914, AL047057, AI142134, AL046442, AL045328, AL037335, AL042898, AL039316, AL047163, AL045671, AL046392, AL040472, AI547295, AL079852, AL043941, AL037295, AL048714, AL045327, AI318479, D29033, AR064707, AR066494, A93923 H66884, W52415, H66877
902	HCROK18	875115	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 645 of SEQ ID NO:901, b is an integer of 15 to 659, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:901, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 583 of</p>	AA593112, AI695197, AI744009, AC004132

903	HCR0K31	875118	<p>SEQ ID NO:902, b is an integer of 15 to 597, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:902, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 305 of SEQ ID NO:903, b is an integer of 15 to 319, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:903, and where b is greater than or equal to a + 14.</p>	AL022328	
904	HCR0E24	875121	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 639 of SEQ ID NO:904, b is an integer of 15 to 653, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:904, and where b is greater than or equal to a + 14.</p>	T85431	
905	H2CBN19	875123	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 713 of</p>	<p>AI801795, AA307808, AW028846, AI620590, AW088677, AA741431, X51698, AR019336, U47289, X97790, U47292, X97793, X97791, U47290, U47291, X97792, AR019344, AR019345</p>	

906	HDTLM04	875124	<p>SEQ ID NO:905, b is an integer of 15 to 727, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:905, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 764 of SEQ ID NO:906, b is an integer of 15 to 778, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:906, and where b is greater than or equal to a + 14.</p>	N54214, M85613, AB001633	
907	HOCTE49	875125	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 555 of SEQ ID NO:907, b is an integer of 15 to 569, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:907, and where b is greater than or equal to a + 14.</p>	AA743462, AW029490, AI309109, AI990569, AI969654, AI791482, AI732527, AA506672, AI732529, AA506404, AI791315, AI791317, AI886055, AI783569, AW151136, AL039011, AI872423, AI678446, AI344826, AI345415, AW194014, AW022636, AI933992, AI571699, AI565172, AI473451, AW055252, AI961589, AI631216, AW163834, AI638644, AL041734, AI345347, AW071417, AW089844, AA814451, AI648699, AI620639, AW089275, AW129979, AW084097, AI364639, R20540, AI434242, AI333104, AW166937, AI679550, AW082532, AI699020, AA743430, AI873638, AW023338, AA908294, AI696583, AI421662, AI580027, AI918554, AI147292, AA225339, N25033, AI368579, AA830609, AI627714, AW409862, AI950729, T66952, N22276, AW409931, AI307557, AI345612, R65859, H89138, AI345416, AI439452, AI677797, AL045421.	

AI925164, N75779, AL121454, AI580674, AW162194,  
AI345688, AA916133, AI689614, AI917252,  
AI445611, AW169634, AI633061, AI439978,  
AI866691, AL138406, AI863665, AA580663,  
AI690813, AI583578, AL037558, AI566430,  
AI538885, AI698391, AW129264, AI240602,  
AW265004, AL040558, AI890391, AI539462,  
AW166583, AI567302, AW163554, AI538085,  
AW081383, H42557, AI270039, AI348777, AW023859,  
AW327325, AI572096, AI627893, AI274508, R39624,  
AI335426, AW083572, AI309306, AI586931,  
AL047756, AW170773, AI784028, AI128239,  
AI590134, AW058233, AI799540, AI884318,  
AI630928, AI349742, AL041150, AI690411,  
AI273899, AW161892, AW008085, AI349958, F37409,  
R75918, AL038716, AW083168, AI927233, AI267185,  
AI254731, AI590415, AI865880, AI869377,  
AA494167, AI274655, AI699211, AI446721,  
AW105087, AA504514, AW054939, AI590624,  
AI634467, AI114703, AW080076, AW080700,  
AA765656, AI610714, AI365256, AI819522,  
AA999906, AI890507, AI345417, AI470717, R41605,  
AI368691, AW366372, AW084353, AW073994,  
AW080326, AI53402, AL119791, AW166861,  
AA983883, AI610645, AW161202, AI491904,  
AI658566, AL036705, AI468872, AA761557,  
AL036187, AI888665, F34030, AW090387, AI251221,  
AW169213, AI469270, AI433611, AW023871,  
AI434731, N27632, AA769697, AI561177, AI918376,  
AI620864, AI584130, AI955945, AA808175,  
AI250646, AI684244, AL135517, AI284131,  
AI952145, AI830187, AI538850, AI345608,  
AW168700, AW025279, AL120307, H41759, AI370623,  
AW081866, AL036673, AI890628, AI382313,  
AI564749, AI338427, AI079226, AI446536,  
AA835966, AI539260, AW085370, AW044367,

				AW050725, AI566399, AI095003, AI355779, AI925680, AI440239, W38553, AI653829, AI378123, AI566670, AI144071, AI889953, AI699823, AI282930, AI802542, AI583567, AI740623, AW029457, AI345471, AI656270, AI679266, AF154840, Z49258, AF145233, AB007812, AL137478, AF114170, AF061573, AF067728, AF008439, AL133067, AF017437, U72621, E01314, AC002471, I89947, AL117587, AF146568, S53987, AL117432, AF032666, I66342, AL137550, AL117435, AF076464, X63162, AF118090, AL080074, X72889, AR020905, AF057300, U57352, AF057299, AL137527, AL078602, AL080124, AL137271, M86826, AF047716, AL133062, AF113689, AL122106, AF082324, AL117394, U76419, AL137538, AF169154, A07588, AJ238278, AL117460, M27260, AL133014, U42766, Z97214, X99257, AF179633, S77771, AL078630, X66862, AF055917, AR038854, A18777, Y11587, A77033, A77035, AF026124, Y09972, AF030513, AR034821, AL133565, X83508, AF113690, AJ131955, I48978, S82852, A08913, AF016271, A52563, E01614, E13364, AF107847, AC004227, AF067790, AF100931, AF082526, L13297, D44497, AL137258, AL080139, AL049452, A08912, AL137267, A21103, A08910, A08911, A08907, AF113019, I89931, A08909, A86558, AL034400, AL080159, AF176651, AF112208, AF094480, AF124728, S83440, AL133010, E02221, AL137292, AL133560, I49625, S75997, A08908, AL035458, U90884, E12580, AL137533, S69407, S76508, AJ001838, AL050277, AL133640, AL034417, AF182215, AL133665, AF115410, E12747, I89934, AL117648, AL122110, X82434, A57389, X79812, A65341, AF038847, D89079, X70685, Z82022, I17544, AF106697, AF126488, Z37987, AL110221, AL117578, S68736, AL096728, X67813, AF102578, AJ012755, X96540, U49908, U88966, AF113694,

908	HWLNR78	875126	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 364 of SEQ ID NO:908, b is an integer of 15 to 378, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:908, and where b is greater than or equal to a + 14.</p>	<p>AL049996, Y10823, Y13350, AL137530, I03321, AF015958, AJ005690, AC006571, AF162270, AL035587, AC004822, AL133088, AF017152, AF036268, AL117440, U49434, AF044323, AF002672, X00861, AL137476, AR068466, A15345, I79595, AF002985, Y10655, AF100781, S36676, AL133080, A27171, AL137665, Y00093, AR053103, X76228, AF118094, AL109672, A65340, AL049382, AL080154, AP000133, AP000030, AR059958, E15324, AC005048, AF158248, U73682, AL137656, AL137273, U78525, AL122121, AL133112, AL050366, AR011880, A70386, S61953, E03348, AF065135, E03349, AF030165, AF069506, AL117416, X52128, AP000250, E12579, AL122045, AF199027, AL050143, AL122118, AL080126, AL137641, AL137548, AL110280, AF061943, S78214, AC004200, AF013214, X54971, AL133054, AF111851, AL110296, AB025103, X89102, AL137536, AL137711, AL137558, AL137547, AF042090, X93328, AL050138, AL080129, AF201468, U77594, I89944, AF077051</p>
909	HCEDD96	875131	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by</p>	<p>AI733227, AA947235, AC007501</p> <p>AA195203, AW205958, N31717, AA195232, AI341353, AW139706, AI698676, AI093230, AI123522, AI656594, AI208758, AA975916, AI264922, AI089224, AA256604, H24039, AA989452, AW205941,</p>

			the general formula of a-b, where a is any integer between 1 to 679 of SEQ ID NO:909, b is an integer of 15 to 693, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:909, and where b is greater than or equal to a + 14.	N39147, R95955, AW105059, AA659637
910	HHFHS96	875133	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 357 of SEQ ID NO:910, b is an integer of 15 to 371, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:910, and where b is greater than or equal to a + 14.	H63042, AW245524, AW163472, N83553
911	HWLNO90	875134	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 670 of SEQ ID NO:911, b is an integer of 15 to 684, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:911, and where b is greater than or equal to a + 14.	AW022580, AA174155
912	HE2JO22	875139	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by	

	the general formula of a-b, where a is any integer between 1 to 457 of SEQ ID NO:912, b is an integer of 15 to 471, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:912, and where b is greater than or equal to a + 14.		
913	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 590 of SEQ ID NO:913, b is an integer of 15 to 604, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:913, and where b is greater than or equal to a + 14.</p>	875143	<p>HCYBJ96</p>
			<p>AA305249, N29048, N40240, AW378532, AW179009, D59467, D80522, D51022, D59610, C14389, AW360855, D80366, D80043, D80251, D80133, D80253, D58283, D51060, D80241, D50979, D80188, D81026, D80391, D80248, D59787, D50995, D80166, D80196, D80269, D59859, D80045, D59275, D80022, C14331, D80195, D51423, D59619, D80210, D51799, D80164, D80240, D80227, D59502, D59927, D81030, D80212, AA305578, D80219, AW377671, AA305409, T11417, D80193, C15076, D57483, D80038, D59889, D80024, AA514188, AW360811, C14014, D80378, D80268, AW177440, AA514186, AW178983, D80439, C14429, AW178893, D80247, D80302, AW375405, D59373, T03269, R95448, C06015, F13647, AW179328, AW366296, C75259, AW360844, AW360817, AW375406, AW378534, AW178906, AW179332, AW377672, AW179023, AW178905, D51103, AW177505, AW177501, D80157, AW177511, C05695, AA555182, D51759, AW352171, D80132, AW377676, AW178762, AW352170, AW177731, AA724922, AW178907, AW378528, AW179019, AW179024, AI499588, AW360834, D58253, D80134, AW367967, D51250, AW176467, AW178775, AI491817, AW360841, T92347, D80014, AW369651, AW179020, AW178909, AA191659, AW177456, AW179329, AW178980, AW352158, AA425118, AW178914, AW177733, AW178908, AW178754, AW179018, T48593, AA838190, AW352117, AA579179, D59653, AA010299, AW238488, AI580250,</p>



	AI031973, AA669564, AL119941, H09071, AI027459, AW179004, AA381011, AW178774, AW179012, AW378525, AW352120, AW352163, AI084294, AA630672, H82316, AW102846, AI420028, AL119713, C14227, AA101689, AW084466, AA669155, AI891080, T99179, AL080242, AR060138, AB028859, AC004386, AR008278, AL035699, A62298, AJ132110, AL033523, A84916, A62300, AR018138, AF058696, Z82214, AC002054, AC005048, AC004087, AC005939, AC007298, AL096791, AC007664, AC008018, Z69715, AC006241, Z97196, AL034417, AL121658, AC004491, AC004031, AC005759, AC002564, Z99495, AP000039, AC006121, AC005993, AC005037, AC002416, AC006427, AC009411, AL034374, AL031281, A82595, AC005305, AC004756, AL032822, AC005880, AC006509, AC005488, AC004885, AC005803, AP000108, AC000364, AL031005, AC007308, AP000159, AC004858, AC005011, AL121603, AC004057, AC007537, AC005844, AL035587, AL049697, AL139054, AC004112, AL135744, AC018767, AC004652, AF095725, AL049745, L05367, AC005940, AC006313, AC005815, AJ229042, AL118497, AP000356, AC007556, AC002455, AC005587, AP000215, AL031671, AL049758, AR060385, Z94162, AC005224, X67155, AC005337, AC006466, AC005234, AC006014, Y17188, AC005242, AC009233, D26022, AC005144, A25909, AC006112, AP000030, AB002449, AC004242, Y12724, AB020861, U20476, AC003103, AP000555, AF067844, AC006840, Z98750, AP000281, AF027390, AL022170, AL033521, AC004686, AL049776, AB023054, AC005988, AL022240, Z84478, AC004543, AC005568, AL023577, AF109907, AC007955, A94995, AL109754, AC004595, D34614, AP000502, AL024498, Z98048, AC007193, AC006322, AC004194, AC004528, A67220, D89785, AC003030, A78862, AC002078, Z99716, AC008033,

914	HCQDV29	875I44	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 353 of SEQ ID NO:914, b is an integer of 15 to 367, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:914, and where b is greater than or equal to a + 14.</p>	<p>Z80232, AC005972, AC002558, AL049565, AC005102, AC006571, AC004790, AL117694, AL049830, U61375, AJ010770, AL031466, AF045555, AC005091, AL035400, AC005280, AC002038, AC005081, AP000295, AC004972, AC007207, AC005548, AC002432, Z97054, AP000350, AC011504, AB020869, AF012654, X81001, AL035410, AB022430, AC005785, AP000745, AL031282, AC006208, AF001549, AC002528, Z93848, AL031670</p> <p>AL036180, AI133004, AI174946, AI133259, AI065079, AI207423, AI207597, AI064695, AI133218, AI133420, AI110646, AI064831, AI110645, AI133698, AA522946, AA160197, AA229530, Z98452, AA630934, AA468444, AI133099, AI064928, AI174665, AW073816, AL037870, AL037849, AL048198, AA886120, AI557077, AA524676, AA650324, C18017, AA490180, AA602274, AI061660, AA196337, AA130107, AA075016, AA075595, AL048429, AA502854, AI253444, AI114770, AA533954, AA081859, AI110815, AA429176, AI460015, AA081406, AI366551, AI717995, C18661, AA522591, AI366019, AI459473, AI525868, C18389, AI907036, C18379, AA075635, AA194553, AA523493, AW007608, C16892, AI253348, AA807804, AI560053, AA126340, AI833147, AI884494, AA525479, AA522587, AA878500, AA978232, AI832270, AA632775, AW438405, AA229483, AA223082, AA689249, AI366023, AI709394, AA541550, AA888285, AA745556, AA095476, AI832355, AA886596, AA486974, AA216175, AA602242, AA640469, AA654821, AI888487, AA149603, AA513233, AA635254, AI582341, AI064907, AA165016, AA659277, AA566024, AA640561, AA595864, AA091446, AI064797, AA193142, AA558762, AA224000, C18031, AA627260, AW238393, AA112897, AI653760, C18852,</p>
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915	HCRPQ66	875150	Preferably excluded from the	AA630170, C18231, AA594949, AW081962, AA148381, AA630259, C17988, AA504683, AI133314, C17170, AA496598, AA664578, AI720552, AA642163, AI832732, AI832340, AA721533, AA659265, AA522984, AW062515, AA091197, AA092811, AW275829, AA669077, AI924211, AA094304, AA197080, AI536118, AA293391, AA879049, AA076526, AI750150, AW270021, AA248521, AI459425, AA578589, AA093200, AA469406, AA079089, AI124928, AI720986, AA247210, AA887028, AW390463, AI064836, AI434498, AA643797, AA486180, AA095860, AW385222, AW188463, AA575977, AW390478, AI253310, AW389679, AA492126, AL037048, AA095848, AI635477, AI525065, AW377099, AA887030, AA081861, AW176708, AI912529, AW238554, AA610388, AA095651, AA886490, AA548849, AA172233, AW004905, C14174, AI628930, AA485848, AA618334, AI133289, AA715869, AA737110, AA459176, AA533828, AA550932, AI880409, AA093878, AI557565, AA492518, AA493969, AI557197, AA530955, AI683207, AA098789, AI000746, AI215649, AI720912, AA291026, AA468098, AA526350, AI620571, AA845722, AA879152, AI028073, AW149630, AA091047, AA468404, AA089795, AW168232, AA650306, AA285306, AA112030, AA729085, AW379318, AW419429, AA493842, AW166013, AI766356, AI204214, AA679857, AA095843, AI523371, AA487595, AW238748, AA630251, AI557254, AA225169, AI535913, AW361141, AI819696, AW401887, AL036471, AA090461, X62996, X93334, V00662, J01415, D38112, AF134583, S55589, D38116, X93335, D38113, X93347, D38114, Y17171, Y17179
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916	HE9RN07	875151	<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 272 of SEQ ID NO:915, b is an integer of 15 to 286, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:915, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1046 of SEQ ID NO:916, b is an integer of 15 to 1060, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:916, and where b is greater than or equal to a + 14.</p>	<p>AL120820, AI114879, AA305044, AA216697, F12227, T66356, W22473, AA477705, AF156488, AF176228, AF156487, AL035071, AF129267, AF129268, AF129269</p>
917	HDQE155	875154	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 699 of SEQ ID NO:917, b is an integer of 15 to 713, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:917, and where b is greater than or equal to a + 14.</p>	<p>AA315836, AA436804, AI609528, AI358912, AI813498, AI094843, AI361926, AI123843, AI744918</p>
918	HCYBI95	875156	Preferably excluded from the	AA305248, N54839, R19266, AL138192, D81026,

			<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 581 of SEQ ID NO:918, b is an integer of 15 to 595, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:918, and where b is greater than or equal to a + 14.</p>	D80164, D80043, D51060, D80133, D80195, D80522, D59502, D59275, C14014, AI903219, C14389, D80391, D80022, D59787, D81030, AA305409, D59467, D80227, D80196, C15076, D80248, D59859, D80269, D80166, D58283, D80193, D59619, D80210, D80240, D80045, D50979, C14331, AA514186, D51423, D51799, D80253, D80366, AA305578, D80212, D50995, D80038, D80024, D80219, D80188, D51022, AA514188, D59927, D80302, D80251, AW377671, D57483, D59610, D80378, D80247, D59889, C06015, D80268, T11417, D80439, AW360811, AW177440, D80241, C14429, AW178893, AW178983, AW375405, D51103, D59373, T03269, C05695, AW178906, AW366296, AW179328, AW360844, AW360817, C75259, AW375406, AW378534, AW179332, AW377672, AW179023, AW178905, D80157, F13647, AW378532, D80258, AW360834, AW177501, AW177511, D51759, D80132, AW352171, AW377676, AW367967, D59653, AW352170, AW177731, AW178907, AW378528, AW178762, AW179019, AW179024, D80134, D51250, AW176467, D80014, AW360841, AW177505, D58253, AW179020, AW178775, AW369651, AW178909, T48593, AW177456, AW179329, AW178980, AW178914, AW177733, AW178908, AW178754, AW179018, AW352158, AI525923, AW352117, H67854, D45260, D81111, AW178774, C14227, D59503, AW352120, D59627, H67866, AW179004, AA809122, AW179012, AW378525, AW352163, D58246, C03092, T03116, D58101, AW378543, AW177728, AW352174, AI535686, D80064, AW179009, AW178911, AW367950, AW177722, AW177734, AW378540, AI910186, AA514184, D59551, D59317, AI535959, AW178781, AI905856, C14077, D45273, D51221, AI525917, D51213, C14407, AW178986, C14973, C14344, AW378533, AI535850, T03048, D59474, AI557774, AI525920, AI525227, D60010, AW177723, D60214, AI525925, Z21582,
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919	HCUDX92	875157	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 264 of SEQ ID NO:919, b is an integer of 15 to 278, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:919, and where b is greater than or equal to a + 14.</p>	<p>C14957, C14046, AI525242, AI525235, C14298, D80168, AW378539, AI557751, D59695, AI525912, AW179011, AA285331, C16955, D52291, AI525215, T02868, H67858, AW378542, D31458, C05763, Z33452, T02974, AI525237, AI525222, D51097, Z30160, C13958, AW360855, C04682, AI525928, AF058696, A84916, AB028859, AJ132110, AF135022, AF105332, AB033042, A62298, A62300, AR018138, AR008278, A82595, AR060385, AB002449, X67155, Y17188, A94995, D26022, Y12724, A25909, I50126, A67220, D89785, A78862, D34614, AR008443, I50132, I50128, I50133, D88547, AR066488, AR016514, AR060138, A45456, A26615, AR052274, I14842, X82626, AR016808, Y09669, A43192, A43190, AR038669, AR066487, AR054175, A30438, Y17187, X68127, AR025207, A63261, D50010, AR066490, AR008277, AR008281, I82448, I18367, AR062872, A70867, AR016691, AR016690, U46128, AR008408, I79511, A64136, A68321, D13509, AR060133, AB012117, Z82022, AF123263, AR032065, U79457, AR060382, AR008382</p> <p>AI300507, AA503459, H82845, H90328, AA114131, AA356280, AA372548, AC002369, AF053356, AC007537, AL024498, Z85986, AL022165</p>
920	HCRON75	875160	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a</p>	<p>AI934274, AI469768, AI084500, AI278335, AA040586, AW192311, AI015787, AW005485, AW273459, AA938464, AI241303, AA479214,</p>

921	HWLNR94	875165	nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 333 of SEQ ID NO:920, b is an integer of 15 to 347, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:920, and where b is greater than or equal to a + 14.	<p>AI282749, AA452413, AI799916, AA432193, AA995903, AI004146, AA902306, AW341825, AI302646, AA730505, AI400390, AI868755, T40774, W02777, AI038039, AA013109, AI537782, H07058, AA877238, AA182799, AI418984, AA017529, T48214, AA978013, AI911851, AA776891, AW304390, AW006644, N75836, AI084476, AA232952, AA479122, AI932697, AW196023, AI208222, F04445, F01828, AI130678, AW190128, T40963, AA644390, AA058919, AI122868, AI087324, AA369059, AA243728, AI561065, AI921425, AI828356, AA057173, AI803455, N35151, AI597644, AA354898, AI336533, AI620708, AA235996, N23222, AI816733, W60616, AA587281, AA954671, AI859497, AI357056, AW129922, N69671, AI066552, AI434169, AA194995, C01287, AA243833, AA418568, AA779835, AA418584, H43864, H53350, AA253056, R85536, R75653, AA629185, W24835, AA040558, AA789172, AA194809, AA535768, AA479121, W07476</p> <p>AC005300, AC006946</p>
922	HCRPY40	875174	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 139 of SEQ ID NO:921, b is an integer of 15 to 153, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:921, and where b is greater than or equal to a + 14.	<p>AL045916, AI014550, AW205277, AA775845, AI051916, AI381892, AI424322, N35376, AI810456, AA847552, AI910984, AI332893, AA885257, T60096, AI633075, F03985, AA664513, AA044225, AI868555, R44429, AA906159, L13832, AA971914, C14356,</p>

923	HHEXW67	875177	<p>is any integer between 1 to 916 of SEQ ID NO:922, b is an integer of 15 to 930, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:922, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1344 of SEQ ID NO:923, b is an integer of 15 to 1358, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:923, and where b is greater than or equal to a + 14.</p>	AA947838	<p>AA534865, AI972721, AW024640, AI686105, AI910871, AA777027, AI540070, AA424285, AI972994, AI581903, AA788840, AI005416, AI160974, AA424484, AI273568, AI222356, AA514202, W92744, R44594, AA383997, AI202893, W92867, AA679683, AI624954, AI695910, AA928816</p>
924	HWLNH10	875178	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 65 of SEQ ID NO:924, b is an integer of 15 to 79, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:924, and where b is greater than or equal to a + 14.</p>		
925	HDQEG93	875182	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a</p>	<p>AI991109, AI573169, AI554809, AA149006, AI733786, AI858718, AW176660, AI623804, AI557053, AA565141, AF170583, AF124439, AF124438, AF035527</p>	



926	HWLQT75	875190	is any integer between 1 to 1412 of SEQ ID NO:925, b is an integer of 15 to 1426, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:925, and where b is greater than or equal to a + 14.	AI339754, AA838377, N31598, D60056, R61377, AA873785, Z39347, T65060, F02714, D52625, H28582, F09593, W32712, AA056512
927	HCRND03	875192	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 710 of SEQ ID NO:926, b is an integer of 15 to 724, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:926, and where b is greater than or equal to a + 14.	AI983632, AW025267, AW272316, AA659262, AA470678, AI890777, AI024574, AA079193, AI803969, AI246363, AI457170, AA465701, AI582165, AI831362, AW242145, AI804441, AW148727, AI689403, AA468711, AA613031, AI923319, N70510, H89293, AW383254, AW383251, AI351905, AA868078, AA730699, AA878423, AA633449, AA652754, AW383221, AI933556, AW383199, AI521443, AC006116, U83880
928	HCWUO91	875194	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a	AI291811, AI146716, AI334351, AW263730, AI192996, AI354288, AI333609, AI191011, AI082067, AW044117, AI868502, AI470433, AI038323, AI342187, AI241881, AI218348, AI808344, AI741256, AI192718, AI760268,

929	HDTIP90	875197	<p>is any integer between 1 to 231 of SEQ ID NO:928, b is an integer of 15 to 245, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:928, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 283 of SEQ ID NO:929, b is an integer of 15 to 297, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:929, and where b is greater than or equal to a + 14.</p>	<p>AI334089, W69457, Z20835, Z20837, Z20838, Z20843, Z20805, N91135, N41765, W87873, AR069078, AF102166, A75045, A75047, A75048, A75053, A75017</p> <p>AA425118, AA425874, AA010299, AA865829, N29860, AI339732, AA010300, AA768334, AI937125, AI383487, AI200629, AI140022, H94387, N64200, AI094333</p>
930	HE9TA31	875198	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 565 of SEQ ID NO:930, b is an integer of 15 to 579, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:930, and where b is greater than or equal to a + 14.</p>	
931	HFPBV89	875200	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a</p>	AA814573, U75285, AC004953, AL137100

932	HWLQZ89	875203	<p>is any integer between 1 to 656 of SEQ ID NO:931, b is an integer of 15 to 670, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:931, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1741 of SEQ ID NO:932, b is an integer of 15 to 1755, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:932, and where b is greater than or equal to a + 14.</p>	<p>AA431391, AA432383, AI090273, AI367314, AL120232, AI298212, AW378278, AI827602, W56760, AW207297, N46844, H79222, W38605, AI244214, W56715, AI218032, AI873993, H79131, AI193942, AI263537, AA733211, AA812972, Z21456</p>
933	HCRMY90	875205	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 676 of SEQ ID NO:933, b is an integer of 15 to 690, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:933, and where b is greater than or equal to a + 14.</p>	<p>AI097657, AI005046, AA813340, AI636914, AI097487, AI493211, AI697153, AI953943, AI378904, AI924159, AI400885, AI493292, AI082107, F30829, R48330, AI309912, H09783, H42982, H18103, AI917833, H20981, AI769442, AI675984, AI862392, AW002435, AI373073, AA862505, AI370933, AI671314, AI273239, N24904, AI341347, N89740, AI700912, AI284290, AI970259, AI872066, AA689333, AA569844, AI206326, AA490593, AI830751, AI420771, H82710, AI681752, H53425, AI263143, R01657, F04440, AI124601, H46265, AA742975, AI637720, AI672283, AI692305, AI969072, AW044491, AI971840, H24582, H47917, AI660826, F36522, AL119429, R42512, F05030, R60010, AI334587, AI568437, AI636598, AI972728, AI698094, AA448948, AI919147, H73765, R35079, AI937157, H81810, H46366, AI264374, R40749,</p>

	AI302145, AI814203, AA579984, H08629, AI241253, N70758, AI784637, AA445972, AA831362, AA449675, AI962774, N73289, AA742512, F04519, H81808, H45607, N36026, AW129948, AA371633, AI918943, AI457339, AI202352, AW292465, W44502, AA976901, H74148, W32735, AI869367, AI538764, AI554245, AI890833, AI364788, AI633073, AI654276, AI567769, AI270099, AI312428, AI590603, AI610114, R36271, AL120853, AA719425, AL135025, AI963068, AL045620, AA808096, AW022682, AI868831, AI612913, AI250293, AL048656, AI497733, AW074993, AI349614, AA640779, AI282326, AA572758, AI312152, AW075084, AI349937, AI340603, AI954183, AI500061, AL036187, AI307708, AI569583, AW274192, AI635492, AI932953, AL079963, AA225339, AL036638, AL036802, AL119863, AI340519, AI348897, AI612920, AI800384, AI340582, AI564765, AI334450, AI680280, AW071417, AL036274, AI814087, AI160954, AI631107, AI281837, AI801523, AI318569, AW020693, AA427700, AI523806, AI475371, AI349645, AW089572, AI815855, AW079572, AL047422, AI828583, AL041150, AI368868, AI811353, AI630252, AI309401, AI627988, AI249375, AW403717, AW302965, AL134999, AI343112, AI826225, AI445165, AI811785, AW268220, AI349598, AL036631, AW023590, AI349256, AI589998, AW151136, AI345735, AI783504, AI929108, AI620284, AI923989, AL036361, AI921248, AI334884, AI571909, AI619502, AI335426, AI802542, AI348777, AI699865, AI348854, AI499285, AW026882, AL038445, AI698391, AI345543, AI815232, AL036901, AI251221, AI500077, AI284517, AI064830, F36033, AI433157, AI702073, AI567351, AL039086,


934	HNBIB35	875206		<p>U58996, AL122098, AL110221, I09499, E02221, AL080060, AL137526, AL110196, AL049464, AL110222, AF061573, AL049938, AF183393, AF153205, AL137533, AL080137, AL137527, Y07905, U91329, U72620, E07361, AF118094, AL049283, AL137560, AL080074, L30117, AL137648, X65873, AF003737, AL133067, A93350, AF104032, AF054599, AL137665, AL133104, X87582, U67958, Z82022, E15569, AL117585, AL133014, U80742, A12297, AL137463, AF162270, AF111112, AF119337, L19437, I42402, AL137529, E08631, AF185576, AL133072, AF008439, AJ012755, AC006840, AJ006417, AL137292, A90832, M30514, AL133098, AL133077, AL137429, AL122049, I09360, Z72491, E04233, AF079763, AL117432, AL137556, AL080159, AF210052, Z37987, AL080127, U96683, Y14314, A45787, AL117440, AL050092, AL050138, X93495, AL137476, E08263, E08264, AF106827, AL133665, AL137273, AF126247, AL137478, X52128, AL080148, AL137294, Y10655, AL050172, AF030513, W44503, AA706537, AA723577</p> <p>AI884729, W81653, AW182472, AA316800, AI499650, W81654, AA340783, AW079879, AI889685, AA172137, AI889690, R12690, AW014526, AW296129, Z17347, R16432, AW170446, AA243050, AI270013, AI902413, AA524041, AI906269, AF098915, AF116571, AF083105, AR060647, AR060646, AR060642, AF149301, AB006329, AJ000740</p>
935	HCQAW68	875208		<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1697 of SEQ ID NO:934, b is an integer of 15 to 1711, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:934, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a</p>

936	HWLRR89	875209	<p>nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 856 of SEQ ID NO:935, b is an integer of 15 to 870, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:935, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 429 of SEQ ID NO:936, b is an integer of 15 to 443, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:936, and where b is greater than or equal to a + 14.</p>	<p>AI950883, AI089360, AA505961, AI468599, AI379044, AI027938, AI333775, AA255751, AW292700, AI972464, N49499, AA173415, W31503, AI678423, AW193647, AA470626, AA456887, AI741193, D30922, AI262232, AA417796, R94806, R94723, AI703182, D31568, AA478711, AA335529, AI004158, AA173505, W94077, N87822, W94078, AC006557</p> <p>W68407, AA513541, W68295, R05299, H43627, N64587, H91844, AI689019, AA747243, F13749, AW167154, AA569065, AL135643, AA229444, AA579184, AA226584, F27015, AA563770, AI859280, AI499472, AI598003, AI751162, AI364809, AA663692, AW162288, AA311156, AW245179, AI955703, AA587641, AA461308, H79676, AA130647, AI178955, AA176717, H62670, AI696793, AA229464, AA643320, AA715878, AL037050, AA584603, AA934680, AA658320, AA346586, AI014361, AI829331, AI699060, W45298, AA904137, AA055918, AA365586, AA610660, AA745337, AA574442, T05319, AA172191, W45283, R23352, AA488620, AI929243, AA831904, AA501418, AI299050, F32893, AC000070, AC000052, S42655, AL035683, AC004019, M87918, AC006211, AL049780, AC006530, AL022316, AL133448, AP000689, L44140, AF196779, Z82180, AC005756, AC009946, U02068, AC000015, AP000556, AC009069, AC005786, AL031255, AC004876, AL133353, AC003964, AC005498, AC003108, AC002418, U73649, AF064858, AL031733, AC005874, AF134471, AC006050, AL121653, AF129756, AL031003, AC021092, AC006039, AC004386, AL021546, AF109907, AC004859, AC002504, Z83826, AC006238, AF045555, AC004211, AL049776, AL109654, AL117536, AC005081, AC009509, AC005971, AC005225, AL109984, AC006079,</p>
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937	HEICC11	875210	Preferably excluded from the	AL031311, AC008115, AC005703, AL022329, AC007055, AC004099, AC005920, AJ003147, AB003151, AL050332, AL022328, AL022163, AF001549, AP000356, AC000025, AB023050, Z98051, AL031662, AL031283, AL008719, AC005746, AC005531, AB014084, U07563, AC004253, AC003119, AP000511, AC007487, AC004921, AC005839, AC007386, AC004913, AC002301, AL009182, AC003684, AC004638, AL023879, AL109798, AC005104, AL031681, AF084941, AL008735, AC006597, AC005291, AC004794, AC005837, AC004854, AL023513, AC004812, Y16790, AC005562, AC006511, AL078477, M58600, AC002425, Z83819, AL022578, AL021366, AC004496, AL022320, AC004079, AL078472, AC005726, AC007136, AC003110, AC005257, AL031670, AC006141, AF064866, Z97056, U95742, AC005915, AC010072, AL121603, AC005089, AC005808, AC003664, AC005369, AC004207, AC000075, AL031228, AC005512, AC007229, AC005755, AL031594, AL122003, AC005479, AC006376, AC007308, AL117258, AC005387, AC004821, AC003692, AC005209, AL031589, AL050343, U47924, AC005527, AC002470, AC005988, AL020997, AL035587, L35485, AC005740, AC002091, AL080243, AC005480, AC007011, AC007435, U91325, AF207550, AC002070, AL023807, U14705, U95739, AL024498, AR000118, AL135744, AC004678, AC006285, AF134726, AC003101, AC002558, AC006111, AL034418, AC004687, AC004931, AC005529, AC006257, AP000114, AP000046, L47234, Z70289, AC005800, AC009516, AC005288, Z68162, AC004132, AC003958, AC004263, AC004778, AL034420, Z82198, AC005759, AL133163, AC006001, AF043945, AC007191, AC004167, AL008635, AL049642 AI822096, AW055351, AW025170, AI738870, N74105,
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938	HOHAU31	875211	present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 476 of SEQ ID NO:937, b is an integer of 15 to 490, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:937, and where b is greater than or equal to a + 14.	AI908453, AW167780, T20232
			Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1151 of SEQ ID NO:938, b is an integer of 15 to 1165, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:938, and where b is greater than or equal to a + 14.	AI082833, AI338355, AI380850, AA442723, AI126571, AA977252, AI796807, AA744566, AI498240, AI869676, AA804766, AI356565, AA393967, AI937681, AI141830, AI362778, AI962284, AA769508, AI266381, N68361, AA648745, AI628738, AI937696, N93235, AI566330, AA837210, AA488188, AA400818, AA768792, AA010778, AW135635, AA011186, AI937706, AA456354, AI740716, AI633524, W25092, AA401161, AA402881, AA454705, AI765112, AA806815, N94030, AI347193, R38452, AI392957, R36533, AA247860, AI802287, AA910408, AW365114, D87957
939	HHEVA12	875214	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 434 of SEQ ID NO:939, b is an integer of 15 to 448, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:939, and where b is greater than or equal to a + 14.	H82458, AI807402, AI702959, AI828066, AA844652, AI990582, AI867867, AI650779, AI783685, AI823816, AI763024, AI703213, AI394033, AW450682, AA932131, AA631102, AA883441, AI245841, AI202267, AI798617, AI680581, AI399658, AA962795, AI351810, AI433871, AI953582, AA308767, AJ006591
940	HWLPE33	875215	Preferably excluded from the	AW148699, AA037650, AI560082, AI270751,


941	HCRME38	875223	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 721 of SEQ ID NO:941, b is an integer of 15 to 735, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:941, and where b is greater than or equal to a + 14.</p>	<p>AC004815, AL049780, AL136295, AC004874, AC005037, AC006509, AC005826, AC005529, AL021391, AP000689, AC005527, Z94801, AC005399, AC016027, AL008726, AL050348, AC006141, AD000092, AL121769</p> <p>AA357892, AA352090, AA169706, N48669</p>
942	HUSFH63	875226	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 844 of SEQ ID NO:942, b is an integer of 15 to 858, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:942, and where b is greater than or equal to a + 14.</p>	<p>AI989470, AI739105, AW003166, AW450745, AI798962, AI394656, AI762864, AI090267, AI650759, AI360003, AW451412, AI332832, AA639490, AW448996, H22460, AI659730, AI243133, AA700052, AA922300, AI276808, AA481892, W80881, AW196339, AW001627, W80754, AA887717, W76370, AA490319, AI362569, W72312, AA490418, AA922615, F33362, AA379821, AA947197, W57568, Z41493, AA216710, AA218589, AI631175, AW081873, AW235387, AA937923, AA868799</p>
943	HMWDC2 8	875228	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1331 of SEQ ID NO:943, b is an integer of</p>	<p>AW194969, W52839, AI521938, W81166, AI199267, R68505, N47371, W81165, AI827849, AA086195, R46033, AI816972, T64991, AI797732</p>

944	HUVDI48	875236	<p>15 to 1345, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:943, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1815 of SEQ ID NO:944, b is an integer of 15 to 1829, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:944, and where b is greater than or equal to a + 14.</p>	AI479925, AI886110	
945	HCQBE84	875238	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 374 of SEQ ID NO:945, b is an integer of 15 to 388, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:945, and where b is greater than or equal to a + 14.</p>	T81835	
946	HCYBJ39	875239	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 623 of SEQ ID NO:946, b is an integer of</p>	<p>AI739548, AI220390, AA242763, AA242742, AI280472, N29550, AI474281, AA305458, N42160, AW295694, AI376757, AI051056, D59275, C14389, D51423, D51799, D59859, D80164, D80038, D80195, D59467, D80227, D59502, C14331, D58283, D80022, D80166, C15076, D80253, D59619, D80210, D80391, D80240, D81030, D80043, D59787, D80269, D80024,</p>	

			<p>15 to 637, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:946, and where b is greater than or equal to a + 14.</p>	<p>D80212, D50979, D59889, D80193, D80196, D80188, D80219, D57483, D59927, D80366, D80378, AA305409, D80045, D50995, D59610, AA305578, C14429, D51060, D80241, T03269, D51022, AW178893, C14014, D81026, AW179328, C75259, D80251, AW177440, AA514188, AW378532, D80134, D80248, D80522, AW178775, D80133, AW369651, AW360811, AW178762, AA514186, D51250, D52291, D59695, F13647, AW352158, D58253, AW375405, AW377671, AW177501, AI910186, AW177511, D80168, AW366296, C14227, AW360844, AW179023, AW360817, AW375406, AW378534, C05695, AW179332, D51079, AW377672, AW178905, D80268, D81111, AW352117, D80132, AI905856, C14298, AW176467, D80302, AW179020, C14407, AW352171, AW179019, D59373, AW377676, D80439, AW352170, AW177731, AW178907, AW179024, AW360834, D80247, AW177505, D51103, AW178906, AW378540, AW360841, AW178909, AW177456, Z21582, AW179329, AW178980, AW177733, AW378528, AW178908, AW178754, AW179018, T11417, AW352174, AW179012, AW179004, AW178914, AW378525, AW367967, D80157, AA285331, C06015, D51097, AW177728, AW179009, D51759, AW178774, AW178911, AW378543, AW177722, AW352163, D59503, AI557751, AW178983, AW178781, D59627, T48593, AI557774, D58101, D59653, D45260, AW177723, AW352120, H67854, AA809122, AI535850, C03092, H67866, AI525923, AW378533, D59317, AW178986, AW367950, C14975, AI535686, D51213, T03116, T02974, D80258, AI525917, D45273, D58246, D80014, C14344, C14973, D80064, AI525920, D51221, D59551, D59474, D60010, AA514184, D60214, AW177734, AI525227, D50981, C14957, AI525235, C14046, AI525242, AI525925, T03048, AI525912, C16955, AW378539, AI525215, AI525222, AW378542, C05763, Z33452, AI525237, AF064104,</p>
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947	HCRMW5 0	875240	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 739 of SEQ ID NO:947, b is an integer of 15 to 753, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:947, and where b is greater than or equal to a + 14.</p>	<p>AF064105, AF023158, AC006024, AC004899, A84916, A62300, A62298, AJ132110, AR018138, AF058696, AB028859, X67155, Y17188, D26022, A25909, AR008278, A67220, D89785, A78862, D34614, I82448, D88547, X82626, Y12724, AR025207, AR060385, A82595, A94995, AB002449, I50126, AR008443, AR016808, AB012117, I50132, I50128, I50133, X68127, AR066488, AR016514, I14842, A85396, AR066482, AR060138, A44171, A45456, A26615, AR052274, A85477, I19525, A86792, U87250, Y09669, A43192, A43190, AR038669, AR066490, X93549, AR066487, AR054175, A30438, I18367, Y17187, X64588, A63261, D50010, AR008277, AR008281, I79511, D88507, AR062872, A70867, AR016691, AR016690, U46128, AR008408, A64136, A68321, D13509, AR060133, AF135125, Z82022, U87247, AF123263, AR060382, AR032065, U79457, AB033111, X93535, AR008382</p>
948	HCQDF84	875246	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 898 of</p>	<p>AA776462, AW129423, AI969716, AA989719, AA535427, AA160871, AA015965, AA749060, AI962767, AW192584, AI288894, AA954800, AI767952, N43845, T67088, R00572, T52847, T06646</p>

949	HNHOD84	875253	SEQ ID NO:948, b is an integer of 15 to 912, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:948, and where b is greater than or equal to a + 14.	
			Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 426 of SEQ ID NO:949, b is an integer of 15 to 440, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:949, and where b is greater than or equal to a + 14.	AA515440, AA448050, AA252729, AI274692, AA569065, AA456937, AI038990, AA715004, AA070456, AI039393, AA367788, AI799545, AI635196, AC006530, AC005081, AC006312, U47924, AC002352, AC006273, AC007227, AF064858, AC002350, AL121578, AC005839, AC004477, AC007773, AL021578, AC002301, AC004595, AL031257, AC002558, AL031667, AL050332, AC005015, AC007919, AC007993, AC006512, Z94801, AL021366, AC005820, AC004686, AL035587, AC007546, AC007199, AC002470, AC004890, AC004905, AC009263, AC005041, AP000557, U82828, AC005358, AC006480, AC004841, AC007051, AP000269, AC007308, AC005971, AC008018, AL031282, AL049569, AC005527, AC006285, AC007371, AP000550, AP000103, AC007114, AF111169, AC006430, AC005189, AC005274, AC002349, AC002115, AL034423, AC007358, AP000502, AC005539, AC002073, AP000010, AC012627, AC005921, AL049776, AC006996, AJ003147, AL031311, AC004883, AC003080, AC004467, AC004685, AF055066, AL049697, AL035448, AC004882, AL109628, AC006356, Z93017, AL136295, AL121653, AC005857, AC005544, AC005911, AC005529, AL049869, AC005258, AL008582, AC007221, AC005064, Z84488, AC006111, AL031431, AC003003, Z85996, AP000432, AL049636, M90058, AC004623, AC004887, AC000159, AL022323, AL034429, AC005562, AL049709, AL023513, AC004000, AC008079, AL034379, Z49237, AC007298,

950	HACCF57	875254	<p>AP000115, AC007283, AC004552, AF038458, AC008273, AC005919, AC002425, AL049795, AC005783, AC005046, L44140, AC006115, AL021939, AC004383, AL031432, AC006538, AC005089, AC002996, AL035422, AC005913, AL020993, AC004554, Z9884, AP000961, AL034420, AC005300, AC000004, AC005747, AL121603, AC007193, AL021707, AC005940, AC007055, AC005345, AL031279, AL049761, AC016025, AC005335, AC005520, AC006128, AC002039, AL023575, AC005696, Z75744, AC008394, Z82244, AC004010, AL132642, Z83840, AL096774, AC007537, AL022163, AP000555, AC005630, AL080243, AL035681, AC006966, AC000070, AL035079, AL122020, AP000503, AC004024, AL035555, Z84469, AC007204, AC010206, AC008080, AL096775, AC006539, AC005901, AL031230, AP000553, AC008116, AC002310, AL031388, AC006211, AL049834, AC004812, AL024506, AF030876, AF047825, AL031466, AL022318, AC005953, AC005086, AL035659, AC006077, U95739, AC005900, AC005488, AC006042, AC005844, AC006057, AP000356, AC005229, AL033525, AC002119, AL121825, AP000513, Z97181, AC006130, AL049837, AL133245, AL035697, AC005772, Z98051, Z99128, AC006146, Z82215, Z97183, AL035462, AC005184, AC004526, AL139054, AC000085, AC004745, AC006058, AC005878, AI190289, AI269506, AI266578, AI269675, AW271406, H79201, AA252407, AA528568, AA370149, AC004968, AL020995, AC006475</p>
			<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 992 of SEQ ID NO:950, b is an integer of 15 to 1006, where both a and b correspond to the positions of</p>



951	HHPGU61	875261	nucleotide residues shown in SEQ ID NO:950, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1288 of SEQ ID NO:951, b is an integer of 15 to 1302, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:951, and where b is greater than or equal to a + 14.	AL133938, W73204, W73155, AI805317, AA419206, AW173355, AI923361, AI189698, W93728, AI341123, AA569389, AA280531, AI050064, AI569599, AW271616, AA018580, W69901, AI537121, AI830730, AA648501, AI242641, W69902, AA291938, AI870690, AA458785, R16192, AI087886, AA878642, AA747631, R70090, AA747509, AA932013, AI472922, AW079067, AA419138, W93727, R70042, T06392, N40472, AI537448, F02745, T28656, AA971490, N48510, AI982637, AI784630, H82392, AW118143, R16193, H86484, D80096, Y00770, X66533, AF020340
952	HFATS83	875269	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 457 of SEQ ID NO:952, b is an integer of 15 to 471, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:952, and where b is greater than or equal to a + 14.	
953	HAMFL51	875270	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 904 of SEQ ID NO:953, b is an integer of 15 to 918, where both a and b correspond to the positions of	AA337951, AA430987, AW023901, D31891, AF091628

954	HPLBS64	875271	<p>nucleotide residues shown in SEQ ID NO:953, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1669 of SEQ ID NO:954, b is an integer of 15 to 1683, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:954, and where b is greater than or equal to a + 14.</p>	<p>AW083230, W73245, AI805176, W72935, AI860873, AI811648, AI022957, AA126952, AW083518, AA810239, AW183807, AI568191, Z41829, AA368757, R49004, F02867, AI924800, AA764821, T85141, T88703, T03382, R01387, T83486, N99859, AA372901, T83338, AA927856, H95935, N70726, AI392721, AI955362, AC000357</p>
955	HHFGS83	875275	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 105 of SEQ ID NO:955, b is an integer of 15 to 119, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:955, and where b is greater than or equal to a + 14.</p>	
956	HCQA183	875276	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 337 of SEQ ID NO:956, b is an integer of 15 to 351, where both a and b correspond to the positions of</p>	<p>H95418, Z21176, AI341170, AA331619, AA332051, AI699036</p>

957	HKIAB83	875277	nucleotide residues shown in SEQ ID NO:956, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 361 of SEQ ID NO:957, b is an integer of 15 to 375, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:957, and where b is greater than or equal to a + 14.	R28559, R21765, AI440499, AW317012, AI936766, AA065268, W84822, T77368, AA114092, W84775, AA045419, AL034418, U80737, AF010227, AF016031, AF036892, AF012108
958	HOUAT80	875278	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 543 of SEQ ID NO:958, b is an integer of 15 to 557, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:958, and where b is greater than or equal to a + 14.	AA862635, W72675, W93044, AA308526, AA877204, W93172, AI696392, AI572790, W77781, AI683779, AW087469, AW296863, AF086486
959	HCUUG82	875279	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 332 of SEQ ID NO:959, b is an integer of 15 to 346, where both a and b correspond to the positions of	AW167842, AI057032, AA526539

960	HWLMY8 <sub>3</sub>	875280	nucleotide residues shown in SEQ ID NO:959, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 760 of SEQ ID NO:960, b is an integer of 15 to 774, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:960, and where b is greater than or equal to a + 14.	AI620847
961	HHGDB82	875281	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 887 of SEQ ID NO:961, b is an integer of 15 to 901, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:961, and where b is greater than or equal to a + 14.	AI744663, AI459158, AI399947, AI042501, AA005077, R76404, R76743, AI222161
962	HHEMA27	875282	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1438 of SEQ ID NO:962, b is an integer of 15 to 1452, where both a and b correspond to the positions of	AI672414, AI122760, AI337912, AI090244, AW090300, AI623661, AI742232, AA149420, AI023964, AA975373, AI288904, AA890325, AI458424, W37573, AI984583, AA528775, N32562, AI358102, AW241694, AI038448, AI961291, AA576391, AI672071, AI018389, AA977874, W37448, AA315805, AW189392, H28241, H44349, AA612894, AI277548, H25318, R75904, H89551, AI373653, AA376906, AW366504, AI699774, H89365, AW172758,

963	HWLQS11	875287	nucleotide residues shown in SEQ ID NO:962, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 409 of SEQ ID NO:963, b is an integer of 15 to 423, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:963, and where b is greater than or equal to a + 14.	AA345675, AA369319, AA369335, AA369205, AI791888  T55228, AA129314
964	HCRNO87	875288	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 772 of SEQ ID NO:964, b is an integer of 15 to 786, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:964, and where b is greater than or equal to a + 14.	AW392670, AW363220, AW372827, AW384394, AL119497, Z99396, AL042965, AL119319, U46341, AL119457, AL119324, AL119363, AL119484, AL119341, AL119391, AL119355, AL119483, AL119443, AL119496, AL119522, AL119396, U46351, U46349, AL134538, AL119335, U46346, U46350, U46347, AL119418, AL119444, AL042975, AL134533, AL042614, AL037205, AL134920, AL119439, AL043029, AL134532, AL134528, AL134531, AL119399, AL134518, U46345, AL042984, AL042970, AL042450, AL042542, AL043011, AL042544, AL043019, AL042551, AL119464, AL119488, AL043003, A81671, AR060234, AR066494, AB026436, AR054110, AR069079  AA932250, AA084323, AA081576
965	HCR0J83	875292	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1326 of SEQ ID NO:965, b is an integer of	

966	HCQDD32	875296	15 to 1340, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:965, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 870 of SEQ ID NO:966, b is an integer of 15 to 884, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:966, and where b is greater than or equal to a + 14.	AA903973, AI369389, AA192180, AA992672, AA973837, AA976064, AI420102, AI431269, AI074883, AI086258, AI718078, H21506, AA910919, AW388254, AA860627, AF196779, AC002470
967	HDPQA93	875303	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1618 of SEQ ID NO:967, b is an integer of 15 to 1632, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:967, and where b is greater than or equal to a + 14.	AW385514, AI680084, AW383462, H71830, H71831, AA001764, AA079799, AW022882, H75407, AW371976, AI337917, AA001763, N77408, AW071441, AI819604, AI801942, AA090682, R73712, AA093185, AA766265, H71832, R98356, AW189924, R72364, AA938925, AA568662, AI985177, N54850, AI499252, N72625, AI657092, AI536615, AI141384, AI625581, AA079498, AI793057, H60272, AI220201, AA890506, AC000399
968	HCQDT68	875304	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1578 of SEQ ID NO:968, b is an integer of	AI337917, AI985177, AI801942, AI499252, AW071441, AI625581, AA766265, AW022882, AA938925, AA568662, N94843, N54850, AI657092, AI536615, AI141384, AA079498, R98356, AA001764, AI684821, H71831, AI220201, R73712, N94856, C01783, R72312, AW189924, AI357243, AI819604, R89459, AI540471, AI680084, AA093185, AA090682,

969	HE2RW42	875305	15 to 1592, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:968, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1917 of SEQ ID NO:969, b is an integer of 15 to 1931, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:969, and where b is greater than or equal to a + 14.	AI698429, AW383462, R72364, AW075583, AW385514, H75958, AW371976, N77408  AI973007, AA044726, AI912603, AW368067, AI591108, AI304361, AA629391, AA044763, AI693263, AI383983, AI765403, AI452690, AI765415, AW022807, AI687138, WI5541, AI921849, AI039238, AA828440, N73899, AA60224, AW160328, AI342940, W31635, AA830160, AA603493, AI540328, H55741, AA913472, AA648460, AI378160, AA911784, AA974711, AI342224, AW129496, AI348335, AA478418, AA701478, AI689148, N64832, AI692531, AA602416, AW129495, AI619537, R94469, H88664, AA292403, AA402343, AW005495, AW129491, H57652, N75940, W05172, H55740, W03962, AW182981, N24346, AI289454, R20310, R94470, AI805703, R64266, H88710, H89663, R20717, AW235449, Z42099, AA010348, T30281, R44317, R57427, AA463788, Z38368, H03530, R46182, H89516, N75854, AA933035, Z20064, N75684, AW129490, AI867961, AA115343, A74487  AA503363, AI860667, AW189824, N62619, R55787, Z41236, AB028992
970	HAGDP04	875306	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 729 of SEQ ID NO:970, b is an integer of 15 to 743, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:970, and where b is greater than or equal to a + 14.	
971	HWLRA80	875307	Preferably excluded from the	R93889, AI123939, AA284726, AA948167, H82244,

		<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 553 of SEQ ID NO:971, b is an integer of 15 to 567, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:971, and where b is greater than or equal to a + 14.</p>	<p>H61797, AA293426, AA293034, AL121270, AL036802, AW104724, AI349772, AL036396, AL040243, AL036146, AI568855, AW071349, AI348897, AI349645, AW162071, AI590128, AI758437, AW071417, AI625079, AL045500, AI538716, AI564719, AI433157, AI635461, AI620284, AW238730, AL119049, AI349256, AI868831, AI349004, AI433976, AW268253, AL119791, AL135661, AW074993, AI340582, AI349614, AI521012, AI500077, AI312152, AI345735, AI475371, AI567351, AI349933, AW103371, AI349937, AW074869, AW089572, AL045903, AL047042, AW301409, AI445432, AL120854, AL036274, AI440426, AI597750, AI064830, AI281779, AI636456, AL047763, AW148320, AI800453, AI800433, AW087445, AL036980, AI439087, AW303152, AI250293, AI678302, AI568870, AW169653, AI499463, AW274192, AI249257, AI682841, AI343112, AL048871, AI275175, AI702406, AI857296, AI702433, AI440239, AL038605, AI633419, AI498579, AI866002, AA508692, AI536685, AI497733, AI281773, AL121014, AI207510, AI274541, AI866608, AA613907, AL040169, AW068845, AI687728, AI269205, AI580984, AI684265, AI224992, AI469532, AI697137, AL121365, AI802542, AI613017, AL036759, AW026882, AW117882, AI282655, AI366549, AW071412, AL046849, AI349598, AI540832, AI271786, AL119828, AL038778, AI610307, AI631107, AI499393, AI818683, AW195957, AW301300, AI445025, AI285735, AI349226, AW268072, AI699857, AI815383, AI436456, AI906328, AL038779, AI687375, AI591311, AI920968, AI608667, AI281762, AI580190, AI628205, AI500659, AI500553, AI921379, AL120736,</p>
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	AI690835, AI753683, AL044207, AA640779, AI863014, AI499131, AI432969, AI687376, AI446628, AI690751, AW302992, AW183130, AW075351, AI340519, AI492540, AI612913, AW118557, AI754897, AI619502, AI969601, AI783504, AL043326, AA225339, AI866780, AI269696, AI934036, AI493248, AI686926, AW168650, AI318280, AW166645, AI610645, AL119748, AI888953, AI866887, AI475134, AI679724, AW151485, AI539771, AL121463, AI811863, AI873731, AI282281, AI679764, AI434281, AI687415, AW080838, AI680113, AI307570, AI524671, AL036361, AI673256, AI671679, AI439745, AI874109, AI569616, AI907070, AI570384, AI609592, AI859733, AI583316, AI889203, AI799305, AI343059, AA572758, AW167776, AI290154, AI567632, AI597918, AI687127, AI636445, AI800411, AW235035, AW085799, AI690480, AI862142, AI934035, AI568854, AI149592, AI869367, AI334902, AI919058, AI889839, AA528822, AI872711, AL042753, AI811353, AW075207, AI312542, AL036240, AI696398, AI560012, AI345778, AW302965, AI818206, AI952114, AW002342, AI799199, AI307466, AI620868, I48979, I89947, AL117457, S78214, AF090934, AF113690, AL122050, AL133640, AL133016, AL133606, AF090903, Y11587, AJ242859, AF090900, AF090901, AF113691, AF090943, AF078844, AF113013, AF118070, AL110196, AF113694, L31396, AL050146, L31397, AF118064, AL049452, AL050393, U42766, AF125949, AF104032, A93016, AL110221, I89931, S68736, AL049938, AL122093, AL117460, AL133075, AL080060, AF113689, AR059958, AL050149, AL137527, X84990, AF090896, A08916, AF106862, AL050116, AF113676, AF113677, AL050108,

972	HWLRC80	875308	Preferably excluded from the	AL049466, A08913, AB019565, AL050277, AF113019, AL133557, AL049314, AF017152, AL096744, AL080124, AL137459, AF113699, Y11254, AL080137, AL137557, X63574, AL122121, I48978, AF111851, AL133565, AF158248, AL122123, AL137283, E03348, AL133080, Y16645, AF146568, AL133093, AL117394, AJ000937, U91329, AR011880, E07361, AF125948, X82434, AL050138, AL049430, AF091084, AL137550, AF097996, I49625, AL110225, AF079765, AL049300, E07108, AF177401, AL133560, A08910, A65341, AJ238278, A77033, A77035, E02349, AL049464, AF017437, U00763, A08912, A08909, AL122098, AL117435, AL117585, A03736, AL050024, AL049382, AL117583, Z82022, AL137271, AF087943, AL137648, AF183393, A58524, A58523, I03321, AL122110, AL049283, X96540, AL137538, U35846, AF067728, AF118094, X70685, S61953, X72889, AL133113, I33392, AL137521, AL137463, X93495, U72620, A12297, AF095901, U80742, X65873, AL080127, AC007390, AL121603, U67958, X98834, A08911, AL110197, AL137560, AL080159, AF061943, AR038969, AF110520, AF111112, AL096776, AF026816, AL133072, I09360, E05822, I42402, AJ012755, E08263, E08264, AC006840, A93350, AF091512, E15569, I26207, AL122049, AC006371, AC002467, AL133568, AL080074, AL050172, AC004093, AF026124, I66342, AF061981, AC006222, AF119337, E12747, AC004200, AF000145, AF057300, AF057299, AR013797, Y09972, U49908, AL133104, I17767, Y14314, AL137523, Z72491, AL137480, AC006336, AR000496, U39656, AL049776, I00734, Y10655, AC006039, AR038854, E00617, E00717, E00778, Z98036, AC004690, AF162276, AL133077, AL035587, AL022147, AF003737, U02567, AF11849, U68387, AL133014 AA516214, AA515728, R99613, H68343, AI281401,
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<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 352 of SEQ ID NO:972, b is an integer of 15 to 366, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:972, and where b is greater than or equal to a + 14.</p>	<p>AA502098, AI636734, AA584183, AI078409, AI439393, AA584493, AI798407, F08866, AA303165, N69226, AW157731, AI567391, AA492114, AA610433, AW381847, AW381904, AL045476, AW051819, R70884, R48980, Z84466, AC006965, AC004991, Z93930, AL035086, AC002302, AC006023, Z85986, Z97056, AC002350, AL049872, AC007536, AL008718, AL121603, AC007057, AC005529, AC006449, AP000694, AC004895, AL049631, AC007199, AP000692, AC002310, AC003689, Z84480, AC004383, AC005527, AC006262, Z82243, AC002072, U95739, AC005015, AC005011, AC002070, AC006146, AC004000, AC007066, AC006236, AC005874, AF134471, AC005332, AL133244, AC005089, AL022238, AL133448, AL031283, AC008372, U91318, AL009183, U63721, AL031584, AC002312, AC006571, AC004593, AP000354, AF047825, AC009542, AC002540, Z93023, AC006455, D87675, AC009330, Z98742, AP000045, AC005740, AC004801, AC007371, AC005826, AC004084, AP000355, AC005562, AC006379, AC005971, AC004765, AP000065, AL021155, AL078477, AL031432, AC004797, AC006039, AF109907, AL139054, Z98052, AL132987, AC006285, AL049760, AC006966, U91326, AL096701, AC002544, AC007308, AC009247, AL049832, AP000068, AP000501, AC005225, AF126403, AC006530, AC005988, AC005005, AC004223, AC002375, AC004933, AC000379, AF038458, AC005702, U82828, AC004491, AC006111, AC005088, AC005482, AC004686, AC000353, AC005753, AP000509, AP000044, AP000112, AL118516, AC000097, AC006547, AL079304, AL035089, AC000025, AF001548, AC005632, AC005291, AL050333, AP000555, AC004125, AP000116, U89337, AL035407, AL021579, AC007130, AC004216, AF030453, AC004805, AC008009, AC005484</p>
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973	HWBBH79	875309		<p>AC007041, AL050318, AL096712, AC005231, AC005412, AC005620, AC003101, AL133371, L78810, AL079342, AC009509, AC005881, AC005023, AC004796, AL008730, AC004024, AF001550, AL021368, AL133245, AC004821, Z98946, AL022396, AC006487, AC007193</p> <p>AA53541, AA864815, AL035587, AC000025, AC005037, AC005527, AC006946, AF047825, AC004921, AC005529, AL031683, AF121781, Z99495, AC005071, AC005722, AC005484, AC007216, AL031255, AC005632, AC005288, AC002549, AC006238, AC004041, U95740, AL009031, AC002326, AC004913, AC005004, AC005829, AC004966, AL109628, AL050318, AL096702, AC004000, AC004655, AD000092, L78810, AL139054, Z85987, AL133245, AL109984, AC003663, AL078584, AC007055, AC006487, AC004491, AP000151, AC003041, AC005531, U91327, AL031657, AP000512, AC006117, AC005839, AF060568, AC005578</p> <p>AI346026, AI962859, AI913561, AI472009, AI310418, AW029442, AI299771, AA211594, AI926843, AW073920, AW002745, AI267539, AA328951, AI439422, AI025251, H89260, R64087, AA401091, R62957, AA443413, H58246, R63010, H02733, H03899, AI590100, H03888, AI174264, R26971, R82805, N50199, H02624, R26739, AI874342, AA709363, AA094718, D82321, AL133603, E16311</p>
974	HJMAF44	875310		<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 929 of SEQ ID NO:973, b is an integer of 15 to 411, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:973, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 929 of SEQ ID NO:974, b is an integer of 15 to 943, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:974, and where b is greater than or equal to a + 14.</p>
975	HWLWT47	875311		<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a</p> <p>AI652734, AA579977, AI655783, N75947, AI925248, AW372172, AC000386, AC008165</p>

976	HWLVG85	875312	<p>is any integer between 1 to 705 of SEQ ID NO:975, b is an integer of 15 to 719, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:975, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 466 of SEQ ID NO:976, b is an integer of 15 to 480, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:976, and where b is greater than or equal to a + 14.</p>	
977	HMVDQ4I	875313	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1980 of SEQ ID NO:977, b is an integer of 15 to 1994, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:977, and where b is greater than or equal to a + 14.</p>	AA403039, AA772356, AA890039, AA706235, AI796685, W56103, AA639769, AA707393, AI971384, AI400642, AI419056, AA931654, AI074056, AA725449, AI278287, AI051080, AA934509, AI056195, AI827412, AA291642, AA252870, AI278795, AI077777, AI344740, AA855074, AA287208, N99681, AA625359, AA707796, AI085793, AA910676, AI375275, AI277706, AA968653, AA482049, AI040845, AA004744, W56146, AA128102, AI038120, AA926651, AI808622, W42934, AI241340, AI419232, AA481865, AA938251, N62191, AI350660, AA846421, AA928335, AA987944, AA805065, AA325681, AI188852, AI266586, AA401330, AI022609, W37593, AI459456, AA514539, AA480369, AA938533, AA694474, AA694542, AA642598, AI085080, R55037, AI719065, AI022981, AI868718, N94983, AW204000, H62802, AA284488, AA125812,

				<p>H62716, H41118, AA639530, T49454, T49455, H42251, T36167, AI350924, AA782685, AA252893, AI051453, R10302, AA214099, W86591, N76488, H42250, N59273, R36922, AA781103, AI191721, AA680383, H22403, N71946, W19456, R10303, AA977361, H22370, W42869, R55145, W37488, AI309601, R10631, R10632, N76744, AA213991, T24749, AA725118, R55007, AA090452, AI247921, AW028468, AI084241, H58310, AW058434, AL137496, I76236, I76219, AC005373, AC006584, AF111168, AC010205, V00589, X57170, AC007182, AC007221, AB019437, X06789, J00063, AF193582, AF193580, AF193585, AF193581, AF193586, AF193587, X71804, AF193590, AC006449, X83747, X83748, AF193588, AF193591, X71799, X71800, X71797, X71802, M10817, AC005409, X83746, X12811, AF193592, X12622, X16851, X58365, AC004787, AB015590, X04309, AF099810, AC005284, V00647, L49397, X58368, M35175, X04308, K01374, X58367, M74438, X83749, X63147, J01861, M13919, M13920, K01537, X63146, X63145, V01426, J01009, AC007955, AJ245808, AL050331, X56635, X56631, X63148, V00648, S73106, X56637, M13375, X56632, AB001499, AP000350, X56636, K03511, K03510, AB001495, AB001492, AB001493, AB001494, AB001498, AB001503, M13921, X05867, AB001501, M18680, AC006120, S73107, AF176349, AF176497, AF176498, AF176500, AF176499, X71805, AB007776, AB007777, AB007778, AB007779, AB007780, AB007781, AB007783, AB007784, AL031320, AF176501, X70229, M21177, AC002123, AJ009866 N40168, AA903100, AA983690</p>
978	HCQCM79	875316	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a</p>	

979	HMSGP80	875319	is any integer between 1 to 597 of SEQ ID NO:978, b is an integer of 15 to 611, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:978, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2483 of SEQ ID NO:979, b is an integer of 15 to 2497, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:979, and where b is greater than or equal to a + 14.	AI936477, AI760800, N51980, AI521742, AA209439, AI374694, AI214467, AI357082, AW242076, AA236684, AA907828, AA465245, AW007908, AA374833, T23960, AI933740, H44856, AA731295, H27880, AI312778, AA465602, AA526524, AA885259, AW130297, N53813, AW379545, AI902418, AI768812, A30438, I25947, U46128, L40401, AJ133038, AR040601
980	HCRNJ78	875324	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 638 of SEQ ID NO:980, b is an integer of 15 to 652, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:980, and where b is greater than or equal to a + 14.	AL043536, AA853979, AI885906
981	HWLOY24	875325	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a	AI560615, AA806114, AI274667, AI972210, Z28533, AI249498, AW242125

982	HDQFG33	875331	<p>is any integer between 1 to 309 of SEQ ID NO:981, b is an integer of 15 to 323, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:981, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 389 of SEQ ID NO:982, b is an integer of 15 to 403, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:982, and where b is greater than or equal to a + 14.</p>	<p>AW009946, AW023737, AA868475, AA603869, AI439406, AW376950, AW376951</p>
983	HWBCW8 0	875332	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 754 of SEQ ID NO:983, b is an integer of 15 to 768, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:983, and where b is greater than or equal to a + 14.</p>	<p>W02027, N39337, AI630995, AI083528, AI697051, AI247382, N39162, AI271827, AA872265, AA490895, N29586, H26439, H63435, H50760, T94899, H61515, H69265, R00446, H63383, H68397, H65294, H71156, H62664, H50667, H81984, AI244094, H59693, H62019, H62018, H61498, AA233137, N73997</p>
984	HCRNL77	875336	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a</p>	<p>AL049780, AC007055</p>



985	H2CBI34	875338	is any integer between 1 to 120 of SEQ ID NO:984, b is an integer of 15 to 134, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:984, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1120 of SEQ ID NO:985, b is an integer of 15 to 1134, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:985, and where b is greater than or equal to a + 14.	AW149514, AI830822, AA313786, AA307529, T39891, AA460891, AW249187, W24503, AA295205, R85532, R85503, AI167901, AW058638
986	HCYBD76	875341	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 733 of SEQ ID NO:986, b is an integer of 15 to 747, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:986, and where b is greater than or equal to a + 14.	AA443424, AA194021, AA305110, AA761642
987	HKMMQ0 8	875346	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a	W03527, AI554702, H68064, H30201, AF085882

988	HILC169	875347	<p>is any integer between 1 to 596 of SEQ ID NO:987, b is an integer of 15 to 610, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:987, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 380 of SEQ ID NO:988, b is an integer of 15 to 394, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:988, and where b is greater than or equal to a + 14.</p>	AA353719, AA369529	
989	HDPGF81	875355	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1467 of SEQ ID NO:989, b is an integer of 15 to 1481, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:989, and where b is greater than or equal to a + 14.</p>	AI799722, AI800618, AI951795, AI361036, AI888307, AI805156, AI889480, AI801367, AI569988, AW338273, AI683381, AI742494, AI289074, AI683749, AI569761, AI433980, AI954055, AA480091, AI878983, AI889033, AI926831, AI581035, AA609522, AW243932, AI811191, AA661720, AI879485, AI598080, AI921223, AA435740, AI498981, AI858952, AI369785, AW157080, AI139320, AW150866, AI370294, AI805420, AI936090, AA847765, AI288335, AI433260, AI358099, AW163049, AI826358, AI678478, AI969161, AW051375, AW192450, AA631244, AA397622, AA877657, AI624185, AA773192, AA621805, AA877463, AI631324, AI688195, AI094479, AA069343, AA040109, AA953868, AA531056, AI748965, AI674371, AI254713, AA719907, AW243826,	

990	HUSGQ41	875356	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 401 of SEQ ID NO:990, b is an integer of 15 to 415, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:990, and where b is greater than or equal to a + 14.</p>	<p>AA044254, AI538053, AW193214, AW087234, AI521053, AI923915, N52689, AW190439, H46483, W57690, AI620841, W02038, AA912451, AI474944, AI918208, T31139, AI561309, AA040108, N49760, T05793, AI926041, T05288, AI657169, AA044278, AA603591, T23448, F04322, AA069342, AA614022, W32237, AI878904, AA904818, H06128, AA523189, AI761161, AA905571, W57691, AA525537, AA594528, AA379468, H54737, AI872060, AWI75844, AI801122, AL050221, X67209</p>
991	HPMFC89	875360	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1266 of SEQ ID NO:991, b is an integer of 15 to 1280, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:991, and where b is greater than or equal to a + 14.</p>	<p>AA706817, AA773629, D51212, N32643, AI082719, AI264019, AI686227, AA922548, AI417059, AA814077, AA459575, AI804037, N23178, AI564799, AA459354, AI432439, W47132, AA410398, AI240317, W47094, AI540566, AI926061, AA588478, N36649, N26018, Z44328, AA804214, AA255499, AW378197, AA993408, AI287595, AA621390, AW362612, N33795, Z40279, AL041421, AA828013, AI565204, AA094833, N24918, AA722135, AW378140, AI758416, AA090679, AA252423, AA252368, AA314490, AI582604, AI379546, AA716597, AA256705, AC007279</p>
992	HWLWK3 7	875364	<p>Preferably excluded from the present invention are one or more</p>	<p>AI769545, AI083549, AA278686, AA969411, AW272214, AI810567, AW139507, AW450854,</p>

993	HSYAG49	875366	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1043 of SEQ ID NO:992, b is an integer of 15 to 1057, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:992, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1081 of SEQ ID NO:993, b is an integer of 15 to 1095, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:993, and where b is greater than or equal to a + 14.</p>	<p>AA888094, AA731153, N50114, T92516, AI686375, AA534901, AA814837, AI701783, AA688070, AA732661, AA651793, AA742239, AA905390, AW401639</p> <p>AA447252, AI095481, AA452700, AW204320, AI276802, AI648576, AA338661, AI264425, AW301092, AI648446, AA642616, AA158010, RI7628, AF050078, AF050079</p>
994	HAGFQ75	875367	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 364 of SEQ ID NO:994, b is an integer of 15 to 378, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:994, and where b is greater than or equal to a + 14.</p>	<p>AL008718, AC005899, AL109952, AP000112, AP000044, AL023494, AC005071, AJ003147, AC004836, AF196972, AL109758, AC004526, AC002430, AC002400, AC007384, AC005189, AL117338, AC003006, AL139054</p>
995	HCHMQ74	875371	<p>Preferably excluded from the present invention are one or more</p>	<p>AA305616, AW001611, AC006057</p>

996	HCQCL42	875372	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 426 of SEQ ID NO:995, b is an integer of 15 to 440, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:995, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 208 of SEQ ID NO:996, b is an integer of 15 to 222, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:996, and where b is greater than or equal to a + 14.</p>	AA836231, AI694593	
997	HHFOB15	875373	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 758 of SEQ ID NO:997, b is an integer of 15 to 772, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:997, and where b is greater than or equal to a + 14.</p>	AA113257, AA159552, AW387067, AW338817, AI925565, AA847565, Z48314, AJ001402, U06711, AJ001403, AF054584	
998	HCRMB64	875377	<p>Preferably excluded from the present invention are one or more</p>	AA777474, AI651999	

			<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 538 of SEQ ID NO:998, b is an integer of 15 to 552, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:998, and where b is greater than or equal to a + 14.</p>		
999	H2LAB72	875378	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 667 of SEQ ID NO:999, b is an integer of 15 to 681, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:999, and where b is greater than or equal to a + 14.</p>	<p>AA284111, AI633503, AI034282, AA584306, AI075794, W46891, AA676660, AI193416, AI918696, AA308007, AI023433, AA778751, W92702, AF154107, AJ245539</p>	
1000	HE8OD44	875379	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 675 of SEQ ID NO:1000, b is an integer of 15 to 689, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1000, and where b is greater than or equal to a + 14.</p>	<p>AI963880, W42534, AI365508, W42487, AF088031</p>	
1001	HCRMZ16	875380	<p>Preferably excluded from the present invention are one or more</p>	<p>R19693, R53125</p>	

1002	HWLMZ75	875381	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 529 of SEQ ID NO:1001, b is an integer of 15 to 543, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1001, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 455 of SEQ ID NO:1002, b is an integer of 15 to 469, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1002, and where b is greater than or equal to a + 14.</p>	<p>AI676059, AW170620, AW074092, AW073701, AI580870, AI523736, AW078677, AI923975, AI393326, AI700229, AW450814, AI671457, AA937534, AI889694, AW339423, AW291875, AA551874, AI682314, AI926227, AW238350, AW088471, AA397375, AI270662</p>
1003	HWLMT21	875382	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 529 of SEQ ID NO:1003, b is an integer of 15 to 543, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1003, and where b is greater than or equal to a + 14.</p>	<p>R42621, AA832189, AA521316, AA837180, R44106, H62203, N71094, H10053, AI913954, AA833669, N91131, AW025339, AA991917, AA687795, AI824854, AI379265, AI186373, AI971502, H05411, N75423, AA224317, AA588019, H92193, AI658599, AA948717, AI434941, AI823918, H59855, AI340614, AA865670, AA830938, AA815207, AI560789, AA621708, AW338454, AI187049, R16875, AA233166, AI660185, N34558, AA465672, AA040736, AA932524, AA677347, AI538271, AI656797, AI580706, AC003029</p>
1004	HCEMB73	875384	<p>Preferably excluded from the present invention are one or more</p>	<p>AI934461, AI689718, AI084857, R51423, N39408, AA199665, R17548, AI279271, AI290951, N48522,</p>

1005	HWNLF24	875385	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 881 of SEQ ID NO:1004, b is an integer of 15 to 895, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1004, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 749 of SEQ ID NO:1005, b is an integer of 15 to 763, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1005, and where b is greater than or equal to a + 14.</p>	<p>H91945, R51311, AA323134, R18868, R42885, AI302336, D80493, AA723014, AF071086</p> <p>AI982642, AI453557, AW172431, AI094150, H52188, H63357, AA287032, T67010, T80642, H59262</p>
1006	HNHNC74	875388	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 339 of SEQ ID NO:1006, b is an integer of 15 to 353, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1006, and where b is greater than or equal to a + 14.</p>	<p>D80212, D81030, C14389, D80022, D59619, D80210, D80240, C14331, D80045, D80219, D80166, D58283, D59502, D80043, D80391, D80195, C15076, D59787, D59927, D59859, D80164, D59467, D51423, D51799, D59275, D80253, D80227, D80196, D80193, D80188, D57483, AA305409, D80269, C14429, D80366, D80038, D50979, D59889, D50995, D80024, D59610, D80378, D80268, D59695, D51060, D80241, D51022, AW179328, T03269, AW178893, AW177440, AA305578, C75259, C14014, D80134, D81026, AW378532, D80248, F13647, AW178775, AW369651, D80168, AW178762, D80949, AA514188, D80251, D80522, D58253, D51250, D80133, C14298, D80064, D80132, AW177501, AA514186, AW177511, AW360811,</p>



AW352158, C14227, AI910186, C14407, D81111, C05695, D80247, AW352117, AW176467, AW375405, AW377671, AI905856, AW366296, D80439, AW360844, AW375406, AW360817, AW378534, AW179332, AW377672, AW179023, AW178905, Z21582, D80157, AW352170, D59373, D80302, AW378540, AW377676, AW352171, D59627, AW178906, AW177731, AW177505, AW178907, AW179019, AW179024, D51097, T11417, AW352174, AW179020, AW360841, AW178909, AW177456, AW179329, AA285331, AW178980, AW177733, AW378528, AW178908, AW178754, AW179018, AW360834, AI557751, AW179004, AW367967, AW179012, D51213, AW178914, D51759, AW378525, D51103, C14077, AW177722, AW177728, D58246, D59503, AW179009, AW178774, AW178911, AW378543, AW352163, D59653, AW178983, AW352120, D58101, AW178781, D80014, T48593, D45273, D80258, C06015, C03092, AW177508, AW177723, AI535850, H67866, C14975, AW378533, D45260, D80228, AW367950, AW177497, T03116, H67854, AW378539, AA809122, C14344, AI557774, AI525923, AW178986, T02974, D59474, D51231, C14046, D51221, AW177734, AI525917, D59317, C14973, D60010, D59551, AI525920, AI535686, AA514184, C14957, D60214, T03048, AI525227, AI525235, AI535961, H67858, C16955, AI525242, Z33452, AI525912, AW378542, AI525925, AI525215, C05763, AI525222, C13958, AW360855, A62300, A84916, A62298, AJ132110, AR018138, A67220, D89785, X67155, AF058696, Y17188, D26022, A25909, D34614, A78862, AR008278, I82448, AB028859, D88547, X82626, Y12724, AR025207, A82595, A94995, AR060385, AB002449, AB012117, AR008443, X68127, AR066482, I50126, I50132, I50128, I50133, A85396, A44171, U87250, A85477, I19525, A26615, AR052274, A86792, AR066488, AR016514,				
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1007	HCRNF23	875391	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 532 of SEQ ID NO:1007, b is an integer of 15 to 546, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1007, and where b is greater than or equal to a + 14.</p>	<p>AR060138, A45456, X93549, AR066490, I14842, Y09669, A43192, A43190, AR038669, I18367, AR066487, AR054175, A30438, D88507, D50010, Y17187, A63261, AR008277, AR008281, AR008408, AR062872, A70867, AR016691, AR016690, U46128, AF135125, D13509, A64136, A68321, AR060133, I79511, X72378, U87247, U79457, AF123263, AR032065, X93535, AR008382</p>
1008	HFXKG78	875397	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 4001 of SEQ ID NO:1008, b is an integer of 15 to 4015, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1008, and where b is greater than or equal to a + 14.</p>	<p>AL038522, AL038523, AI656231, AL036827, AI636701, AI927512, AI364949, AW235702, AI651731, AI670933, AI672150, AW304454, AI419389, AI632738, AI912944, AI650485, AI523243, AW295423, AW193668, AI949144, AW243009, AW182958, AI751237, AI742823, AW303764, AI767587, AA908773, AI057544, AW002458, AI418398, AI766234, AA845469, AI824836, AI492365, AI480407, W72949, AL049021, AI573281, AI925304, AI392882, AW372998, AI697380, AA583048, AA417157, AI565074, AI831728, AI816887, AI375533, AA411115, AI129721, AI655002, AI224555, AI767867, AW130458, AI809236, AI357167, AA252022, AL039519, AI075011, AI299072, AI245162, AW299961, AI888502, AA994409, AW194333,</p>

				AI690922, AA938151, AW070493, AA411116, W74415, N23604, AI221953, AA602575, AI811917, AI751236, AI359310, AI039259, N24925, AI521595, AW197266, AL135569, W26217, N29889, AA417035, AA554470, AW044504, AA456270, AA679818, AI290272, AI276409, AI423707, N42537, AW028471, R81905, AI807058, AI554433, AW074118, AI357727, H10656, AA581544, AW389416, AW339084, AI500169, H05880, AW051853, AA206968, AI223834, AI376996, AA454655, AI702899, AA989241, AA179471, AI039744, R66934, H29952, H10657, AI905512, AI889371, AA831961, AA013167, R60075, AI864062, AA179545, AA664263, R81801, AI420823, W24240, AW273094, AA223852, AW025301, AI355769, H02924, AA609775, AW341188, AA883592, AI350607, AW136375, AA298021, AA342023, AW135532, AA889804, AI910384, AA598801, H04228, H02129, R66935, AA780989, AI991758, AA248809, AA358737, AA165472, AA095309, N23603, AI476559, R60015, AA430224, AA432347, H29859, H77511, AW085318, N33801, H02028, W79344, AA852581, AA852580, AA297879, AA429648, AA298838, AI307394, AA298495, AW364117, C16159, H77512, AI699272, AA370057, AW276239, AA224135, AA298910, AA987876, AA082377, AI470432, AI274422, H98159, H05773, AI867279, T73175, AA342024, R39484, F34597, AA732321, AI625037, AW166595, R27681, R80024, AA089953, AA358736, T73077, D11682, AA252093, AW166602, AA298907, AA179495, R79934, AL039520, R27582, D62938, N48852, AA179467, AA213504, AA249343, AA279006, AW084308, AA165392, AI933446, AA782244, AA626274, D59405, AA837082, AA593200, AA936036, D82688, R57332, -W79444, C02511, T27327, F13640, AA213432, AA622115, AA278207, AA094933, AA095138, AA298976, F32043, AI926085, AI969655, AI561356,
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AW089275, AW089844, AI002285, AL047100,  
AI815855, AI627714, AI500061, AI433157,  
AI702073, AI633125, AI698391, AI918435, D87684,  
AC006336, U95739, A77033, A77035, I89947,  
AC004093, L13297, AJ005690, AL137480, AL117443,  
AL080110, AL137627, AL137459, AF061981,  
AL133568, AL080156, AL137550, M92439, AR038854,  
AF090900, AF126488, X87582, AF180525, AF090901,  
I48978, AC007559, AF090934, AL080159, Y14314,  
A03736, X82434, AL117435, AL049283, AL137529,  
Z97214, S78214, S82852, AF090903, AL137533,  
A08907, AL080148, A15345, AL137530, AL137523,  
AF057300, AL137271, AF057299, AF177401, I32738,  
AL133112, AL117463, A08913, AF11849, AL137539,  
AL110225, AF087943, Z82022, AL137488, A08912,  
U35846, U88966, Y16645, A65341, AF047716,  
AL050149, AF125948, AR011880, X72387, AL049996,  
X63162, AL133049, I33392, A08910, AJ012755,  
E12747, A08909, AF065135, AL137478, AL122104,  
AC007390, AF113677, AF175903, AF153205, I30339,  
I30334, I09499, AL137294, AL050366, A08911,  
A08908, AL133640, A76335, AF118090, AF031147,  
AL096744, U42766, X72889, D83032, U67958,  
AF113699, S77771, AL023657, AL110228, AL133113,  
S76508, AL049347, AL022147, AF113019, S78453,  
AJ238278, AL133560, AR013797, AF126247,  
AF067728, AL122100, AL137275, AL122118, E01614,  
E13364, AB029065, AL080163, I89931, AF100931,  
AL049382, X70685, AL117416, A49139, AF183393,  
AL117460, AL050138, AF104032, I08319, I49625,  
AL117648, AL122110, AL035458, AF031903,  
AF210052, AL137538, AF039138, AF039137,  
AL080057, AF102578, A21101, Z35309, AF026816,  
AC006039, AL133558, Y11587, X83544, AL133088,  
U90884, AL133067, AF026124, Y09972, AL122045,  
L04504, AL117457, AF061943, AL137292, I48979,

1009	HFPG11	875402	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 387 of SEQ ID NO:1009, b is an integer of 15 to 401, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1009, and where b is greater than or equal to a + 14.</p>	<p>S36676, E05822, AJ000937, AF111851, E08631, AF185576, AR034821, AL110280, AF146568, A18777, S61953, AL110171, X98066, AB016226, AF017437, AF022813, A08916, E02349, I52013, U68233, I92592, AL133075, AL049466, AL133061, AL137476, DI6301, AL133665, AL133080, AR020905, A18788, AL137526, AL133093, AL110158, AL137558, AF158248, S68736, U91329, I89934, AC006313, AF106862, AF113694, AL137283, X79812, AL050277, D44497, AL050172, AL117583, AL080162, AF151109, U66274, A58524, U68387, AL080126, AF139986, AL122121, AF032666, U54559, AL122049, AL049339, AL110196, AL110197, X89102, A12297, AF079763, M27260, A58545, AC004797, I68732, I35495, A58523, AF067790, AF182215</p> <p>D61574</p>
1010	HCROG39	875405	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 742 of SEQ ID NO:1010, b is an integer of 15 to 756, where both a and b correspond to the positions of</p>	<p>AI275431, AI168345, AA406609, AI280460, AA411636, AI627293, AI628781, AI241297, AA317871, AA598485, AI360110, AI968510, AI498174, W02842, F34577, AI697614, AW079061, AI200289, AI804773, AA502751, AI694751, AW173045, AW300325, T49800, H85591, AA993934, AA468896, AA098853, H86495, AA039749, AA889681, AA909667, W87459, AI764965, AW083698, AC005746</p>

1011	HLYBH74	875406	nucleotide residues shown in SEQ ID NO:1010, and where b is greater than or equal to a + 14.  Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 379 of SEQ ID NO:1011, b is an integer of 15 to 393, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1011, and where b is greater than or equal to a + 14.	
1012	HBGNK79	875410	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 924 of SEQ ID NO:1012, b is an integer of 15 to 938, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1012, and where b is greater than or equal to a + 14.	AI831961, AI650845, AW196692, AI824849, AI620989, AW236312, AI918000, AA478378, AI355547, AA610722, AI276362, AI401116, AW149595, AI689357, AI382635, D80414, D80923, AI341250, AI916173, AA902403, AA558991, AA992619, C21278, AA384679, AI800639, AA282083, AA232733, AA768615, R08289, AI089271, W96084, AA701943, AA505078, AW026456, AW051814, AI291876, AA858118, AA813011, AI204546, AI560812, AW130435, AI300180, AI418276, AI560743, AI992293, AA905625, AA846821, AI091612, AA402002, W19987, R94479, AA522719, T86974, T79403, AI703226, H54573, H38643, AA854918, H60026, H96792, T90553, N23206, R94069, N55455, AI221349, AI356940, AW008254, AI149942, AI362691, AA247535, AW128861, AA975506, N56269, N29785, W96085, AL031033, AB018288
1013	HCQCX73	875415	Preferably excluded from the present invention are one or more polynucleotides comprising a	AI761623, AI991188, AI027577, AA583168, AI298597, T48782, AA713860, AW080531, AW007085, AA894812, AA911322, AW338854, T74766, AF129812

1014	HWLQG73	875416	nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 509 of SEQ ID NO:1013, b is an integer of 15 to 523, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1013, and where b is greater than or equal to a + 14.	AI610362, AW149925, AI270183, AI570989, AI802542, AL045500, AI624543, AL041862, AL042628, AL046926, AI570807, AL045266, AI923989, AW082113, AI932794, AL036638, AI499285, AI698391, AI433976, AI889189, AI433157, AW151136, AI815232, AI539771, AI582932, AI537677, AI500659, AI554821, AI269862, AI274508, AI801325, AI500523, AI284517, AI500706, AI445237, AI491776, AW151138, AI521560, AI500662, AI284509, AI889168, AI866573, AI554344, AI633493, AI434256, AL042745, AW022682, AI888661, AI284513, AI888118, AI440252, AI805769, AL121286, AI950892, AL045774, AL049085, AI452560, AI648509, AI569583, AI288285, AL042551, AW079572, AI491852, AI917252, AI927755, AI571439, AI364788, AI439745, AI610895, AI470648, AI468872, AI624548, AW104836, AI554245, AL042627, AI497733, AI889147, AI636588, AL048323, AI344785, AI591420, AI569579, AI539028, AW301409, AI611738, AI811785, AL040243, AL046942, AI648502, AI620284, AW268220, AA806720, AI334450, AW071417, AI308032, AL045903, AI866770, R36271, AI345557, AW029611, AI866510, AI612913, AI494201, AI254731, AI584140, AI537515, AI679179, AL036901, AW051258,
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AL079977, AI619502, AI890223, AL047763, AI564719, AI281772, AL048340, AW268122, AI866090, AW167918, AL047675, AI677796, AW118518, AW088899, AW026882, AL042787, AL134830, AI275175, AI826225, AI670009, AI539847, AI702073, AI306705, AL119748, AI923370, AW190042, AI564259, AI610402, AW194441, AI633125, AI963846, AI499463, AI801152, AI915291, AI926790, AI874261, AW020561, AL039276, AI432656, AI632408, AI798456, AI433037, AI824576, AI933589, AI635067, AL045620, AL037454, AL048312, AI934011, AI564765, AI630928, AI874166, AI687287, AI815855, AA225339, AI273085, AI620003, AI288305, AI249375, AI678357, AL045163, AW073994, AL039086, AI889953, AI345416, AI273843, AI345612, AW023859, AI440239, AI932966, AI571909, AW132056, AI702068, AI174394, AI628331, AI869367, AI683099, AW080746, AI952920, AI436429, AI434134, AI345415, AI335209, AI280732, AW169604, AI431909, AI829327, AI432666, AI862144, AI349598, AI537273, AL119399, AI886753, AW269097, AI436456, AI872300, AI539153, AI627988, AW151729, AI889376, AW129659, AL036403, AI524671, AI567940, AL134999, AI521012, AI802833, AI699011, AI955866, N80094, AI817244, AI521596, AI934035, AI285448, AW083804, AW087445, AW166583, AW050522, AI956080, AW131294, AI345347, AI285826, AI579901, AI863014, AI251221, AI521594, AI890833, AI916419, AI499512, AW163834, AL119863, AI340603, AI889133, AI921248, AI500061, AI306613, AL047422, AI922901, AI567993, AI932638, AF106862, AL122049, AF090900, AL122110, Z82022, I89947,				
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	I48978, AL117435, AL137271, AL133557, AL080124, AF113019, A77033, A77035, I48979, U35846, AL133560, AF113677, AF158248, AJ238278, AL117457, A08916, A65341, AF017152, X93495, AL137550, A08910, A08909, AL133080, AL049382, AF067728, AL122098, AF104032, U67958, AL080159, AF113691, AF090903, AL110221, AL133075, AL133072, A08913, AF017437, AF118094, AF177401, U80742, AF113694, X82434, Y16645, AJ012755, AF091084, AF183393, AL050116, AL133077, AF078844, AF113690, AL049452, AR059958, AF000145, AF090934, AL137557, AF111851, AL137538, AL117460, X72889, I03321, AF118070, AL137463, U42766, AL122121, AR011880, AF026124, AL050108, E07361, I89931, AL137560, AL133016, AL096744, S68736, AL050393, A03736, U72620, A58524, A58523, I49625, AL133640, E02349, AL133565, AF090943, Y11587, AL122050, I33392, AF113013, AL122093, AF057300, AF057299, AL110280, AF081197, AF113699, AL137459, AL050149, AF113676, AF090896, AL050138, AF061943, AB019565, AL117583, X84990, AL117585, AF125948, AF090901, AL133113, AL122123, U49908, AL049466, E03348, AF113689, AJ000937, Y14314, AL137521, AC004686, AF087943, AL049314, AL050277, AL133014, S78214, AF026816, AF003737, I42402, A93350, AC002464, AF097996, Y11254, AL049430, X70685, AL050172, AF185576, X63574, X96540, E15569, AF162270, I09360, AL050024, AL110196, U00763, I26207, AJ242859, AL080127, L31396, X65873, AL133606, AF079765, L31397, AF119337, AL049464, AL110197, AL117394, A12297, AC005156, AL133067, E07108, AL080060, AL049938, AF146568, AL080137, AF081195, AL049300, AF118064, L30117, AL137648, AF125949, AL050146, AL110225, A93016, AL133093, AL049283, A08912,

1015	HMSIB72	875417	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 409 of SEQ ID NO:1015, b is an integer of 15 to 423, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1015, and where b is greater than or equal to a + 14.</p>	<p>AL137527, AF111112, AL137556, Z82206, AC004822, AR000496, U39656, E08263, E08264, Z84814, AL034417, AC006222, AL137533, AL117440, AL137292, AF153205, E02221, AL137480, X98834, AC004383, AC007056, AC007458, S61953, AL137526, AC005048, AL110222, AF061573, U91329, AC009501, AC004594, AR038969, AL080148, AL137476, AL133104, AC005488, AF111849, AR038854, AL133098, Y09972, AF008439, AC006112, AC007392, U58996, AF079763, X53587, AL137283, L19437, AC003001, AC006115, AL133568, AJ006417, AL022165, I00734, AL080074, U66059, A07647, E08631, E00617</p>
1016	HWLMC85	875418	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 860 of SEQ ID NO:1016, b is an integer of 15 to 874, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1016, and where b is greater</p>	<p>H75975, AA431948, AI453095, AW183431, H97697</p> <p>AI023512, AI985187, AA205421, AA858212, AW268700, AA374096, R66513, AW268978, AI003582, AI087966, AW303698, AI222672, T87896, R84690, D62434, N99668, D59600, AF131768</p>

1017	HCRNH72	875419	<p>than or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 1273 of SEQ ID NO:1017, <math>b</math> is an integer of 15 to 1287, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:1017, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	<p>AI985187, AW268700, AA206421, AA858212, R52339, AA740228, AI023512, AA749275, AI222672, AW303698, T87896, R66513, D51928, R67347, R84690, Z39964, F03134, N43996, R40370, AA503490, D62434, D51716, R39023, N99668, C02069, AA374096, D59600, AF131768</p>
1018	HSDHD72	875423	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 448 of SEQ ID NO:1018, <math>b</math> is an integer of 15 to 462, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:1018, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	
1019	HCQAB70	875425	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 352 of SEQ ID NO:1019, <math>b</math> is an integer of 15 to 366, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:1019, and where <math>b</math> is greater</p>	<p>N27979</p>

1020	HCQDN71	875427	<p>than or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 736 of SEQ ID NO:1020, b is an integer of 15 to 750, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1020, and where b is greater than or equal to <math>a + 14</math>.</p>	N94198, AA136314, H90781, H83190, R09097
1021	HCQCQ73	875428	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1319 of SEQ ID NO:1021, b is an integer of 15 to 1333, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1021, and where b is greater than or equal to <math>a + 14</math>.</p>	AI799085, AI472055, AI928190, AA805656, AA813952, AI439157, AI004303, AI061354, AI858450, AA825684, AI249804, AA251281, AA761496, W26450, AI636131, AA573512, W02895, AI355020, AW369621, AW369637, AI367189, AI904017, AI904022, AI521039, T61456, T25898, AI904093, AA911766, AW390240, AI904090, AC004955
1022	HCQAW10	875429	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 551 of SEQ ID NO:1022, b is an integer of 15 to 565, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1022, and where b is greater</p>	AC004013, AJ010770

1023	HCRNE71	875433	<p>than or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 511 of SEQ ID NO:1023, b is an integer of 15 to 525, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1023, and where b is greater than or equal to <math>a + 14</math>.</p>	AA969932, AC000048, AR001316
1024	HWLN71	875434	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 894 of SEQ ID NO:1024, b is an integer of 15 to 908, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1024, and where b is greater than or equal to <math>a + 14</math>.</p>	AA147981, AA687815, AI434923, AA747023
1025	HTXSH02	875437	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 407 of SEQ ID NO:1025, b is an integer of 15 to 421, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1025, and where b is greater</p>	AI393917

1026	H2CBL70	875440	<p>than or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 873 of SEQ ID NO:1026, <math>b</math> is an integer of 15 to 887, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:1026, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	<p>AL135150, AA436897, AA307476, AA461263, AA626419, AI693521, D79997</p>
1027	HNFFQ01	875441	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 447 of SEQ ID NO:1027, <math>b</math> is an integer of 15 to 461, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:1027, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	<p>AA024940, AA311483, AA085629, AF008442, AF047441</p>
1028	HCRMD70	875442	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 909 of SEQ ID NO:1028, <math>b</math> is an integer of 15 to 923, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:1028, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	<p>C14427, C14394, D80309, AA912463, D80304, AI002558, D59721, C14215, AA455562, AW366372, N75779, T99953, AI803887, AI811603, AA808175, AI440263, AI241901, R41605, AW055075, AL040207, AI581033, AI345688, AI6233941, AA908294, AA641818, AI567582, AW161579, T66952, AI741158, AI571439, AI540674, AI254226, N29277, AL040161, AL135047, AI587000, AI866465, AI252077, AL080011, AI299303, AL039716, AI435999, AI590043, AW274192, AW160905, AL038069, AI557104, AW078606, AA648402, AW022636,</p>

			than or equal to a + 14.	AI285514, AL041150, H41759, AA580663, AW074702, AA830406, AI954293, AI219380, AW020710, AI567971, AI891125, AI621341, AL048323, AW149876, AI250627, AW020373, AL048340, AI923989, AI818574, AA928539, AW089844, AI784233, AI002285, AI273791, AI915291, AI859991, AW020095, AI798456, AI924051, AL046944, AI473536, AI700158, AI919500, AW079432, AW059828, AL047005, AI619587, AI249497, AA857847, AI698391, AL036705, AW075382, AI683395, AL047100, F37323, AI345415, AI679959, AI815232, AI702527, AI811840, AI446538, AI628325, AI133475, AW021717, AI887430, AW265004, AI590943, AW300782, AI349012, AI682640, AI827154, AI318603, AI439527, AI251485, AW300889, AI279925, AI589428, AI612852, AL042098, AW021256, AW303152, AW087455, AW083826, AI114461, AI148113, AI742728, AI476480, AW020397, AI633125, AI927233, AW161156, AI287233, AI538805, AI345778, AI801325, AL120695, AW148841, AI491852, AW152182, AW162189, AI590630, AW027898, AW118353, AI500514, AA641644, AI611717, AW161202, AI436438, AW089221, AI738854, AI656270, AW161098, AI096432, AI921197, AA587590, AW410302, AW020415, AI670009, AW051059, AI289310, AW059766, AW168828, AI521005, AL043152, AI890907, AI804505, AI491904, AA693354, AI394522, AI282346, AI524608, AA806534, AA665669, AI918554, AI860476, AI669639, AI557238, AI620944, AL121365, AA769318, AW002807, AI691131, AI538885, AW023072, AI587121, AI570884, AW022084, AL039430, AI918449, AI291601, AI345557, AI889147, AI638644, AI687130, AW198090, AI679506,
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AI811192, R20540, N49165, AI567961, AI537244, AW157096, AA652505, AI924686, AW019988, AI648454, AI797538, AI274515, AI679452, AW050781, AI889189, AW162194, AI524654, AI536685, AI280751, AI538564, AI352274, AI797908, AW090206, AI282930, AW023859, AI471909, AI134712, AI624993, AA809897, AI432644, AW188595, AI690813, AI524179, AC005968, S63521, Z72491, AF079763, AL110296, U72621, I32738, J05277, AF159148, AB016226, AL137550, AL133640, X06146, AL117435, I48978, AL137271, AL137281, AF158248, AL133067, AF210052, AB029065, AC004213, U95114, AF090886, AL133112, X65873, AF113690, AF145233, AL117626, AL050280, I33392, AF069506, AF031147, AL133558, AF090901, A65340, X70685, X72624, AF141289, AL050172, AF177401, AF077051, AL117648, X60786, AL137560, U55017, AF111849, X67688, AL137529, AF039138, AF039137, U92992, AL137284, AJ010277, A77033, A77035, M85164, U42766, AL110218, AR038854, AF175903, I09499, AL137267, A08910, A08909, Y11254, X63162, AF090900, S36676, AF097996, I52013, X86693, AL137555, AF043642, AF106862, A08908, AF118090, I46765, AF017152, AF146568, AF042090, AL035458, AL122110, AL050116, AL133010, AL122123, U49908, A08907, AL137530, AL137459, AL096744, AJ005690, Y10655, AF118094, AL137557, AP000020, AJ000937, Y10936, AF036941, A76335, E12580, U62966, AL137547, AL137658, AF115410, AC007172, AF167995, AL049283, AL122104, M27260, AL137533, AL080156, AF044323, AL096751, X63410, AR020905, AC002464, AR068753, AL137258, AF183393, AF142672, A08912, S77771, A03736, AF182215, D16301, A08911, E12747, A18777, AF113019, AL122103, AB031064, I48979, AL133080, AF153205, E12579, AL122100,				
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1029	HWLWX5 4	875446			<p>U87620, A07647, AF180525, AL080148, U35846, AF104032, AL137479, AL137537, AF113694, AF111851, Y09972, Z30970, I68732, AR011880, S76508, A21101, I89947, A08913, S75997, AL133104, A76337, AJ001039, X52128, X84990, M96857, I26207, AL096728, L04504, AF061573, X72889, A18788, AL133665, AF078844, I89931, AF091084, A91160, AL137558, A91162, AR068466, X53587, L24896, I89934, I89944, I49625, AF082526, AF087943</p> <p>AA917956, AI078015, AA625053, AI308830, AI348305, AI301350, AI343797, AW339860, AA837028, AI275863, AI025643, AI025649, AJ236591</p>
1030	HDTBL01	875452		<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 477 of SEQ ID NO:1029, b is an integer of 15 to 491, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1029, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 919 of SEQ ID NO:1030, b is an integer of 15 to 933, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1030, and where b is greater than or equal to a + 14.</p>	<p>AA203532, AI885145, N93693, N41419, AA025727, AA845624, AA004723, AI659644, AA854840, AW027228, AI741432, AI924412, AI096633, AA775840, AI799560, AA861825, AI086427, AI609775, AI332770, AA043284, AI147012, AI093396, AI334098, AW339068, N36820, AI127039, AW152492, AI310403, AI479699, AI333810, W37902, AI026761, AA779438, AW016793, AA846751, AA83270, AA043623, AA768520, AA481110, AA595137, AA599087, AA004625, W21031, AI493429, AA705148, AA729311, W69693, AI609767, F24839, AI309955, AA147299, AA394002, AA725144, AA847834, AI028144, AA284640, F36989, AI015001, W46526, AA577464, AI074328, AI199865, AA719946,</p>

1031	HTHDF09	875458	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2701 of SEQ ID NO:1031, b is an integer of 15 to 2715, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1031, and where b is greater than or equal to a + 14.</p>	<p>AI368754, N46038, AA700697, AI249119, AI284226, AA399341, F26291, H66106, AA639243, AI198805, W37962, AI863889, AI364330, AA639095, H95487, AA834779, AI204589, AA504802, AA480281, W16986, AI300686, H66059, AI184257, H22374, AI357340, AW264139, AA638994, AA025726, H93397, W05101, R33568, AA386074, AI268427, AA731877, H94967, AA282671, AI310952, H81961, AA846871, AA907906, AA983160, AA317755, AI088526, AI033455, AA304404, AA834753, N74712, R33466, N92916, W04851, C03398, AA593219, AA356363, AI095031, AI707597, AW162955, AA147187, AI968038, H93396, T25738, AL137489, AI262007</p> <p>AI453608, AA114992, AI625087, AI917616, AI697653, AI685132, AA214568, AA938187, AW440559, AI033684, AI280879, AI802985, AW402513, AI765128, AW340123, AI081775, AI089556, AI912727, AI191349, AW237567, AI631607, AA629942, AW439252, AA261781, AI457255, AA677426, AI333330, AA594467, AI871604, AI373583, AA664286, AA648405, AA827076, AI168766, AA253066, AI701917, AI890800, AA115482, D60531, AI469082, N95713, AA663041, AI991576, D81517, AA256425, N34227, AA152336, AI160622, AA771763, AA253031, AI222942, AI202632, N26907, AI275770, AI493287, AI767194, AA279479, AA410856, AA148856, AA243606, AA476875, D60530, AA644615, AW418516, D80813, AA256537, C15455, AA329211, AW418997, AI678343, AI095736, AW083585, AA732584, AW172545, AI306494, AA370336, AI215414, AW025846, T55154, AA136197, AA361218, AA738345, D61320, R21425, R21424, R27634, W24870, U46294, D61007, AI268096, AI383220, AA625241, R30798, AI300612, N39793, AA122368, N56522, AA136036, AA213493, AA587977, D19821, AI674553, AW084191,</p>
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1032	HOHAD26	875460	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2355 of SEQ ID NO:1032, b is an integer of 15 to 2369, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1032, and where b is greater than or equal to a + 14.</p>	<p>AW338833, AA092089, AA418952, AA846916, T08238, AA370335, AA403140, AA403169, AA298076, AB035725, AF155568, AL109618, AF037448, AF093821, R48826, R98718, R98717, AA164785, AA180971, W25910, W26190, AA094508, AA211559, F20745, Z28918, AI124677</p> <p>AA188195, AI472757, AA307374, AA186327, AI267372, W38408, AW389218, AA403169, AA313602, AA411147, AW363698, AA403140, AA465343, AA418952, AA411148, AA465413, AA130302, AI566089, AA150638, AI674553, AI289939, AA654252, AI263768, AW178047, AA306863, AI685132, AA207215, AI765128, AI682619, AI084864, T89722, AA164877, AI810057, W92251, AA164876, AI984419, AW003149, AI581394, AA045158, T35450, AA662966, AA130625, AI625087, AA912195, AA995153, T89635, AW341721, AW293378, AI749465, AA130793, AW440559, AA524815, AW085400, AA298076, AW408715, M61969, T39242, AA363926, T89820, AA164208, AA164209, T05188, W39501, R29647, AW361274, AA356549, AI768414, H20250, H20236, H50487, AA401271, AW402513, AA216046, AI493748, AA094744, D12117, AI672427, AA401274, AI991547, D12266, AA885324, AA340617, AA629942, AI270496, AA045116, T89909, AI597900, AI337035, AA370336, AA677426, AI091687, AA142968, W36280, AA594467, AA134141, AA594120, H20156, AA969126, AA664286, AW294501, AI399871, AA613072, H20141, AW183508, AI110749, N56522, AI469082, AF037448, AF155568, AB035725, AF093821, AL109618</p> <p>AL046056, AC005829, AC003108, AL049872, AB028893</p>
1033	HWLQB70	875461	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a</p>	

1034	HCRN170	875462	<p>is any integer between 1 to 335 of SEQ ID NO:1033, b is an integer of 15 to 349, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1033, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 833 of SEQ ID NO:1034, b is an integer of 15 to 847, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1034, and where b is greater than or equal to a + 14.</p>	AA516030, T93186, R48202, AF086709
1035	HCHAN69	875463	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 521 of SEQ ID NO:1035, b is an integer of 15 to 535, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1035, and where b is greater than or equal to a + 14.</p>	
1036	HDPXJ69	875468	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a</p>	AL022329

1037	H2CBP05	875474	<p>is any integer between 1 to 511 of SEQ ID NO:1036, b is an integer of 15 to 525, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1036, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 986 of SEQ ID NO:1037, b is an integer of 15 to 1000, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1037, and where b is greater than or equal to a + 14.</p>	<p>AA307783, AI928487, AA452227, AA482088, AI394278, AI675154, AI676034, AW364878, AW139920, AI682476, AI347851, AA642892, AA479940, AI091053, AI870992, AI039477, H63416, AI174745, AA002093, AA399509, H00628, R10916, R82783, AA002220, R10231, H63472, AA398368, AI758130, AA478844, U47346, AI864528, AI992031, AA644394, AW207298, AA812485, AA523934, AI202717, C04105, R10969, T49897, AA481986, AL096740</p>
1038	HWLNO16	875475	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 559 of SEQ ID NO:1038, b is an integer of 15 to 573, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1038, and where b is greater than or equal to a + 14.</p>	<p>AI761312, AW372642, AI343498</p>
1039	HCROC40	875477	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a</p>	<p>N52878, N58847, T93808, T75554, T75553, AI698057, T93860</p>

1040	HWLWW3 I	875478	is any integer between 1 to 907 of SEQ ID NO:1039, b is an integer of 15 to 921, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1039, and where b is greater than or equal to a + 14.	AW022883, AA195765, R70828, AF195418, AB025412
1041	HWLOU12	875479	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 367 of SEQ ID NO:1040, b is an integer of 15 to 381, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1040, and where b is greater than or equal to a + 14.	AA307716, AW450491, T68887, AI739472, AA081624, AW196447
1042	HPTTL69	875481	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 748 of SEQ ID NO:1041, b is an integer of 15 to 762, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1041, and where b is greater than or equal to a + 14.	AW014954, AA576626, AI765244, AA705936, C00580, AI280144, AI541388, AI799766, AI720050, AI535888, AI535850, AW079508, AI435666, AI309090, AI284672, AI284682, AI792879, AI733975, AI251416, AI254026, AI307028,

1043	HT3BA65	875484	<p>is any integer between 1 to 382 of SEQ ID NO:1042, b is an integer of 15 to 396, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1042, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 482 of SEQ ID NO:1043, b is an integer of 15 to 496, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1043, and where b is greater than or equal to a + 14.</p>	<p>AI792738, AI252565, AI284703, AI252100, AW271923, AI308032, AI344785, AI270983, AI265738, AI254443, AW303109</p> <p>AA380983, AA542870, AA411590, AA283721, AI961232, AA211734, AI364760, W63553, AL121578, M58581, AF196969, AC007796, AC003108, Z48051, AC004170, AC006162, AB023058, L12582, AF055066, AC006111, AB003151, AP000521, AL022723, AC004084, AC004878, Z95115, AC004235, AP000702, AP000701, AC004832, AL035086, Z75741, Z79996, AC000075, AC000084, AC002491, AC003026, AL035588, AC005839, AC007429, AL117337, AL133243, AC010582, AF205588, U58047, AP001054, U18671, AC002082, AD000092, AC004849, AL049744, AL022316, AL049712, AC005262, AC002404, AC004876, AC007999, AJ251973, Z74617, AF111168, X64467, AL096761</p> <p>AI631592, AW027723, AI696066, H05108, AI992089</p>
1044	HMSHD68	875486	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 455 of SEQ ID NO:1044, b is an integer of 15 to 469, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1044, and where b is greater than or equal to a + 14.</p>	
1045	HSUAE53	875490	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a</p>	<p>AI914128, AA088296, M85677, D53142, T34322, T31626, T31802, T31463, AI905228, T34175, D55192, AA380386, AI535884, N23605, AA355446,</p>

1046	HTJMN69	875491	nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1388 of SEQ ID NO:1045, b is an integer of 15 to 1402, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1045, and where b is greater than or equal to a + 14.	AA029415, D54331, C15325, AA355201, AA256591, AA034335, D55128, T70488, AA326899, AI091590, AA029490, AW339939, AW150093, AI872098
1047	HHMMD6 8	875492	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 844 of SEQ ID NO:1046, b is an integer of 15 to 858, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1046, and where b is greater than or equal to a + 14.	AW081196, AI191523, AI880364, AI272875, AI346121, AI346400, AI222776, AL137734, I95753
1048	HCQDM23	875493	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 307 of SEQ ID NO:1047, b is an integer of 15 to 321, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1047, and where b is greater than or equal to a + 14.	T51473
			Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1388 of SEQ ID NO:1045, b is an integer of 15 to 1402, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1045, and where b is greater than or equal to a + 14.	AI246778, AI346844, AI749252, AI991265, AW001371, AI832475, AI672920, AW000710, AI991837, AW000809, AI281892, AI991841,



1049	HHMO68	875495	nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 521 of SEQ ID NO:1048, b is an integer of 15 to 535, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1048, and where b is greater than or equal to a + 14.	AI983400, AI673613, AW054915, AA857748, AI991308, AI677743, AI672894, AI475425, AW001307, AI732375, AA327452, AI991039, AI673137, AA327059, AA534503, AI732350, AA523410, AI991842, AW374797, AI688199, AI475214, I95743, M94132, L21998
				W32345
1050	H2CBM67	875496	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 419 of SEQ ID NO:1049, b is an integer of 15 to 433, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1049, and where b is greater than or equal to a + 14.	AA307547, N50913, AW340485, AA724762
1051	HWLWJ34	875498	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 700 of SEQ ID NO:1050, b is an integer of 15 to 714, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1050, and where b is greater than or equal to a + 14.	R36306, H06792, R15198, H17756, AL050343

1052	HWLRL54	875499	nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 363 of SEQ ID NO:1051, b is an integer of 15 to 377, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1051, and where b is greater than or equal to a + 14.	AA203208, AI186984, AA699723, AA587865, AI218228, AW149832, AI075775, AI089713, AA620676, AA705153, T97121, AI928705, AI202281
1053	HCR0148	875500	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 797 of SEQ ID NO:1052, b is an integer of 15 to 811, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1052, and where b is greater than or equal to a + 14.	
1054	HCRMM67	875501	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 452 of SEQ ID NO:1053, b is an integer of 15 to 466, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1053, and where b is greater than or equal to a + 14.	W57655, AA629065, AI690293, AA987368, AI889212

1055	HTFNZ86	875502	nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 543 of SEQ ID NO:1054, b is an integer of 15 to 557, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1054, and where b is greater than or equal to a + 14.	AA470029, AW299344, AI754738, AA412216, AI378554, AA236732, AA693510, AI434417, AI082441, AA669879, T79250, AW340374, AA236927, AA258261, AA236743, AI962081, AA770560, C04663, R71348, T79167, AA806372, AA345952, AI769109, T79004, T83261, T90729, AI023542, AI915033, AC013417, D10712, AC007564
1056	HCNCD90	875503	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2858 of SEQ ID NO:1055, b is an integer of 15 to 2872, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1055, and where b is greater than or equal to a + 14.	AI637873, AW241510, AW241455
1057	HMVDK54	875508	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 538 of SEQ ID NO:1056, b is an integer of 15 to 552, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1056, and where b is greater than or equal to a + 14.	AA213877, AA284164, AL039640, AI267553, AW275560, AW275558, AW044372, AB002334

1058	HCQCV65	875512	nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 857 of SEQ ID NO:1057, b is an integer of 15 to 871, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1057, and where b is greater than or equal to a + 14.	AC006026	
1059	HWLNLY66	875514	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 530 of SEQ ID NO:1058, b is an integer of 15 to 544, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1058, and where b is greater than or equal to a + 14.	AW272467, AI002871, AW007817	
1060	HLVCI65	875515	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 583 of SEQ ID NO:1059, b is an integer of 15 to 597, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1059, and where b is greater than or equal to a + 14.	AW080826, AB023201	

1061	HKAAO67	875516	nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 411 of SEQ ID NO:1060, b is an integer of 15 to 425, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1060, and where b is greater than or equal to a + 14.	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 579 of SEQ ID NO:1061, b is an integer of 15 to 593, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1061, and where b is greater than or equal to a + 14.	AI480112, AI190539, AW195714, AW009671, AA834985, AI025324, AI220363, AI458072, AI807491, AA427361, AI523871, AI076240, AI252670, AI972838, AA430339, AI912849, AI636830, AI220365, AI400812, AI418071, AI199462, AW015295, AI492423, AI762057, AC003663, AC003070
1062	HCE3W64	875517	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 318 of SEQ ID NO:1062, b is an integer of 15 to 332, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1062, and where b is greater than or equal to a + 14.	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 318 of SEQ ID NO:1062, b is an integer of 15 to 332, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1062, and where b is greater than or equal to a + 14.	AA885804
1063	HKAKX87	875518	Preferably excluded from the present invention are one or more polynucleotides comprising a	Preferably excluded from the present invention are one or more polynucleotides comprising a	AI365215, AI796579, AW006619, AI207768, AA781399, AI140604, AI431643, AA858281, AI753792, AI628110, AA992608, AA481252,

1064	HUSGX12	875520	<p>nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2326 of SEQ ID NO:1063, b is an integer of 15 to 2340, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1063, and where b is greater than or equal to a + 14.</p>	AA434587, AI762862, AW190880, AA873016, AW363088, AI434855, N62810, AA873017, AA315480, N31669, AA713673, AI090009, AW297060, AI351557, AA305138, W37783, AA433909, AA713672, AI094632, W37784, AA504102, AA812118, N28827, AI086536, AI493922, AA811274, AA167079, AA459547, AA253280, AA885762, AA723085, AI683305, N23355, AA765542, AA668860, R70637, AI168718, W01322, AI128139, AI494098, AI935670, AA293148, AA234306, AA167028, AI675905, AI473341, AI004524, AA627111, AW044230, AA235416, AI623486, R82735, R65666, H00590, AI431353, H44468, AA9335054, AA234396, H03434, T27659, R64224, R64125, R33525, R79785, R79880, AA253233, AA081579, R21415, T99332, H03516, R28580, T99331, D56293, T97190, AA215831, AA011458, AA248735, D62509, R21416, R70534, AA838173, R31206, AA363459, AA204876, T97189, AA011401, AW403913, Z19809, H44434, AR022306, M31468, A74833
1065	HCNDZ15	875523	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1633 of SEQ ID NO:1064, b is an integer of 15 to 1647, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1064, and where b is greater than or equal to a + 14.</p>	AI762621, AI742202, AA446863, AI394107, AW028794, AI221779, AW052092, AA535268, AI183672, AW296681, AA778418, AW297154, AA902908, AI193482, AA476226, C16879, N75843, AA446978, H77651, AW296006, AA621641, D12199, W07640, AI354319, AA906878, W07635, U66075, X95701, D87811, S82462, AF179425, U11889, L22760, U51335

1066	HCFNM40	875525	<p>the general formula of a-b, where a is any integer between 1 to 238 of SEQ ID NO:1065, b is an integer of 15 to 252, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1065, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1081 of SEQ ID NO:1066, b is an integer of 15 to 1095, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1066, and where b is greater than or equal to a + 14.</p>	AA037767, AI961026, AI269898, AA399583, AI689929, AA037780, AA757107, AI968995, AI206593, AA609204, AA813241, D56264, Z45403, AI523529, AL038837, AL039074, AL039564, AL039108, AL039156, AL038531, AL039659, AL039625, AL039648, AL039629, AL039678, AL039150, AL039109, AL037051, AL037726, AL036725, AL039128, AL040992, AL045337, AL042909, AL039423, AL039410, AL039085, AL036973, AL045353, AL043422, AL044407, AL039538, AL038821, AL039386, AL039566, AL044530, AL039824, AL039509, AL043445, AL038025, AL037526, AL036196, T24112, AL037639, AL045341, AW013814, H00069, AL045794, AL043441, AL037615, AL036767, AL036418, AA039277, T23947, AL043423, AL038851, AI535783, AW451070, Z99396, AL036190, AL036191, AL037082, R47228, AL036924, T02921, AW452756, AI535983, AL036117, AA301449, AW372276, AL036679, AL036733, D51250, D80253, T23659, AL037027, AL036238, AL037178, AL036158, D59787, AL036998, AL036964, D59275, D80043, AA514190, AL036765, D80219, AL037601, T48598, Z25782, AL037021, AL037054, AL036174, D80227, AL036268, AW450376, AI680812, D80240, D80134, AL036167, AL037177, D51423, D80210, AL036227, AL037679, D59619, H00072, AL037047, AA631969, AL036139, AL037016, AL036132, D80193, D80196, AL119457, D80168,
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	AL119324, AL037085, AL036953, AL042544, AL119399, AW392670, AL119443, AL119497, AL119418, C75259, AW372827, AW384394, AL119319, AW363220, AL119391, AL119483, AL134531, AL119484, AL119355, U46341, AL119522, AL119363, AL134920, U46351, U46350, AL042965, AL119341, AL119335, AL119396, U46349, AL119464, AL119496, U46347, AL134538, AL119444, AL037205, AL119439, AL119401, AL043029, U46346, AL042614, AL042975, AL042984, AL134532, AL134533, U46345, AB020681, A97211, X68127, Z96142, AR036905, A95051, AJ244003, AJ244004, A85477, A85396, V00745, AR062871, AR031374, A49700, AR031375, AR017907, D88984, I18371, A38214, A58521, AR025207, A44171, I56772, I95540, AR018924, A63067, A51047, A63064, AR018923, A48774, A63072, AR020969, A48775, X73004, AR068507, AR068506, AR015960, AR000007, AR015961, A98767, A93963, A93964, I63120, A95052, A95117, A18053, I06859, A18050, A84772, A23334, A75888, I70384, A02712, A60111, A23633, AR007512, A25909, I19516, A23998, A84776, A84773, A84775, AR062872, A84774, AR062873, AR067731, AR043602, AR043603, A58524, AR043601, AR067732, AF118808, A86792, A58522, I60241, A58523, I60242, A92133, AR037157, A20702, A91750, A43189, A43188, A20700, A64081, AF156296, AR054109, E16590, A35537, I03343, AR036903, A24783, A24782, D28584, A02136, A04664, AJ244005, I03665, A35536, A81878, A02135, A04663, I03664, E13740, E12615, AR035193, AR022240, A13393, I01992, A27396, AR027100, I28266, A11245, A02710, A58525, A82653, I13349, E14304, A07700, A13392, A49045, I19517, A76773, A15078, A22413, E16636, I25027, I21869, I26929, I44515, I26928, I26930, I26927, E16678, I08051, A67220, A93016, A70040,



1067	HMSGC65	875527	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 647 of SEQ ID NO:1067, b is an integer of 15 to 661, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1067, and where b is greater than or equal to a + 14.</p>	<p>AF156294, I00074, AR038762, AR000006, E03165, I49890, I44516, I66495, I66494, I66498, I66497, I66496, I66486, I66487, I00079, U87250, I92483, AR038286, A92636, AJ230933, D14548, E02221, E01614, E13364, E00523, A58526, A91753, Y11923, I00077, I25041, AR035975, AR035974, AR035977, AR035976, AR035978, D34614, A97221, AB012117, A51384, AR008430, S70644, AF096810, A91754, Y11926, A10361, X58217, I68636, AF019720, I07429, A60957, AF156299, A60968, I84554, I84553, S65373, Y17188, AR066482, A60985, A60990, A60987, AF096793, D44443, A18722, AB007195, X15418, M32676, A52326, AR064706, A10363, I69350, A91965, AR027069, A20701, I08250, A04710, AF130655, E04616, S83538, Y11449, X73003, X13220, AR063812, I07888, Y11920, E06034, I03663, AF156302, A02711, A04447, A04441, A04448, A04442, AR060234, Y11447, AR066494, A80951, AF096796, E03018</p>
			<p>AA306873, AA305881, AW245862, AA088641, AA932449, N31513, R25850, N44651, AW248398, R88663, AA137171, AI073401, AI824292, AW274454, AL136295, AF044127</p>	
1068	HCQDN81	875528	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a</p>	<p>AW080296, AF181449</p>

1069	HFICY86	875529	<p>is any integer between 1 to 150 of SEQ ID NO:1068, b is an integer of 15 to 164, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1068, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 990 of SEQ ID NO:1069, b is an integer of 15 to 1004, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1069, and where b is greater than or equal to a + 14.</p>	<p>AA603466, AA287389, AI810216, AA424696, AI346074, AA836562, AA954077, AA909145, AA828876, AI952639, AW083305, AA722253, AA418995, AF067844</p>
1070	HNTSA70	875534	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1292 of SEQ ID NO:1070, b is an integer of 15 to 1306, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1070, and where b is greater than or equal to a + 14.</p>	<p>AI183516, AI677878, AI460183, AI860487, AA780231, AA767130, AA642704, AI022239, AA446006, AI660816, AA456661, AA568272, AI190414, AA446282, AI336027, AA588255, AW182256, AA716624, AA761723, AA663995, AA587405, AW009807, W57982, AA181644, AI678107, W58160, AA171594, AA491861, AA976533, AL040533, AW389542, AA132079, AA745753, AA069141, AA677510, AA397367, AA830442, AA513145, AA993000, AI421653, AA716638, AI287624, AA828103, AA291822, AI801347, N40913, N73507, AA291719, AA854752, H14471, R65693, AI744803, H67766, AA620585, AI215422, H67765, AA852689, D19662, T81375, AA356246, AA173308, T81376, AA026796, H93596, R57341, AA385169, AI381042, H75612, AA132164, N59689, N77499, N57722, N57642, AW139381, U46838, D84557, D86726,</p>

1071	HWLMX6 4	875538	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 136 of SEQ ID NO:1071, b is an integer of 15 to 150, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1071, and where b is greater than or equal to a + 14.</p>	<p>U17565, U67284, U67282, U67283, U67281 R49345, AL079569, AW293080, AW292238, AI205711, AI935312, H03831, W15589, AI381335, AI753006, Z32775, AA418072, AI270007, AI016403, AA857211, AI368095, N76261, C21426, AA564813, AI245209, N62157, AI765556, T32732, AI865287, AW118713, H19452, AI702910, AA928614, AI378351, AA771798, AI079776, AA563729, AI129765, AI770121, AI985502, AI935621, R43221, R81646, AI480297, AI862340, AC005740, AB022663</p>
1072	HTWFG63	875539	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 372 of SEQ ID NO:1072, b is an integer of 15 to 386, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1072, and where b is greater than or equal to a + 14.</p>	<p>AI201047, AW182365, AW293223, AI206387, AI206389, H79861, AI218596, C01349, H79860, AC006449</p>
1073	HWLN32	875543	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 609 of SEQ ID NO:1073, b is an integer of 15 to 623, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1073, and where b is greater</p>	<p>AL121541, N49995, N34595, AI557698</p>

1074	HLJDL64	875544	<p>than or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 615 of SEQ ID NO:1074, b is an integer of 15 to 629, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1074, and where b is greater than or equal to <math>a + 14</math>.</p>	AL036180, AI110646, AI110645, AI207597, AI174665, AI174946, AW073816, Z98452, AA650324, AI064928, AI557077, AI133004, AI064831, AI065079, AI133259, AI133698, C18661, AI064836, AI064695, AA468444, AA075635, C18389, AI460015, AA886120, AA522946, C18379, AI133289, AI207423, AI133218, AI133420, AI110815, AI133099, AA229530, AA630934, AA247210, AA513233, AA229483, AA502854, AA075595, AA075016, AA522587, AA160197, AA130107, AW379318, AA081859, AL037870, AL048198, AA223082, AL037849, AI525868, AA524676, AA095651, AA091446, AA602274, C18017, AA490180, AA126340, AA149603, AI061660, AA196337, AA558762, AA493842, AL048429, AA522591, AI253444, AI114770, AA807804, AA533954, AI064907, AW390463, AA429176, AI366551, AA081406, AI717995, AI560053, AI524985, AI366019, AI907036, AI459473, AI525190, AW007608, AA194553, AA523493, AI253348, AA566024, AA095476, AA525479, AA878500, C16892, AW438405, AA978232, AA093359, AI832270, AW361632, AW062515, AA632775, AA091197, AA076526, AI884494, AA541550, AI833147, AA689249, AI366023, AA888285, AW238393, AA745556, AI709394, AA486180, AA216175, AA486974, AA211250, AA602242, AI832355, AA630170, AA654821, AA640561, AA659277, AA496598, AA112897, AA721533, AA081861, AA504683, AI888487, AA635254, AI064797, C18031, AA224000, AA627260, AA669077, AA595864, AA249205, AI536118, AI217035, AI653760, C18231, AA095843, AA165016, AA594949, AW081962, AA293391, AI064901, C17988, AI133314, C18852, C17170, AI832732, AA664578, AA640469, AW390478,
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1075	HHEQN62	875545	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 542 of SEQ ID NO:1075, b is an integer of 15 to 556, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1075, and where b is greater</p>	AA630259, AA659265, AA642163, AI720552, AA886596, AI832340, AW385222, AA193142, AI217021, AA197080, AA879049, AI124928, AA522984, AW361141, AI253310, AA148381, AA093612, AA092811, AA094304, AW275829, AI924211, AI366559, AW176708, AA492126, AW389679, AW401887, AA248521, AW238554, AW270021, AA575977, AA530955, AA469406, AA578589, AI720986, AW351917, AI000746, AA459176, AA886490, AL038077, AI459425, AA887028, AA887030, AW377099, AW188463, AA172233, AA095860, AA550932, AI525065, AI253331, AA643797, AA526350, AI434498, AL037048, AI635477, AA630251, AI557565, AI683207, AA737110, AA291026, AA610388, AW004905, AA095848, AA485848, AW044030, AI750150, AI557197, AA618334, AA091047, AA715869, AI204214, AA244429, AA093878, AW419429, AA089795, AA285306, C14174, AA468098, AA112030, AW361105, AI557150, AI720912, AA098789, AA493969, AI628930, AA679857, AI912529, X62996, X93334, V00662, J01415, D38112, AF134583, D38116, D38114, X93347, S55589, Y17171, Y17179, AJ238413, AL021068, I25652 AA307385, H38113, AI383794, AF059531, AF059530
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1076	HCQAF61	875546	<p>than or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 406 of SEQ ID NO:1076, b is an integer of 15 to 420, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1076, and where b is greater than or equal to <math>a + 14</math>.</p>	AA148723, AA148592, U73633
1077	HCQCX63	875547	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 722 of SEQ ID NO:1077, b is an integer of 15 to 736, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1077, and where b is greater than or equal to <math>a + 14</math>.</p>	AA496222, N52937, AI913219, AA984383, AA725524, AI800841
1078	HOVET54	875548	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 885 of SEQ ID NO:1078, b is an integer of 15 to 899, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1078, and where b is greater</p>	AI333686, AA781729, AA770054, N66727, AI535727, R49091, T68994, AA011536, T61907, Z40664, R70984, F03267, AA725067, R71002, AI557450, AI536045, AW392670, AL119457, AL119324, U46347, AL043003, AW384394, AL119484, AL119443, AW363220, AL119439, U46350, U46351, Z99396, AL134531, U46349, AL119319, AW372827, AL134527, AL134528, AL134530, AL134519, AL119391, AL043147, AL119483, AL134132, AL134525, AL134536, AL134538, AL119363, AL042989, AL134533, AL119497, AL037205, AL119444,

1079	HRODW53	875550	than or equal to $a + 14$ .	<p>AL119355, AL042965, AL119335, AL079442, U46346, U46341, AL119396, AR060234, AR066494, A81671, AB026436, AR054110, AR069079</p> <p>AW195340, AW444826, AA947277, AA7222891, AW009448, AI420841, AA731773, AI565025, AI927332, AI336337, AI494131, AA947279, AA080216, AI651452, AA825545, AW452410, AI216219, AI243363, AI867450, AA812208, AI573209, AW292860, AA908226, AI458531, W93316, AW079969, AW002549, AI467887, N24875, AA256877, AA262505, AA749144, AA811313, R83301, AA778771, AA766428, AA682799, AW183953, AA255868, H58733, AW243205, AA931058, AI246223, H69591, H69785, AA973454, R83395, N36294, AA299701, AI803225, AA299702, T03865, H58344, H75668, H59592, AA812777, T77893, AA411001, AW367969, AW377666, AA354797, AI825279, AA677816, AW389598, H69023, H65620, AA419509, AI886081, AW377657, AA255471, AA648958, AW296622, W93427, AW183272, AI203101, AW389617, AW367976, AA815060, H67272, H65619, AI218105, AA256747, Z38443, H59593, F05460, AI634666, AI208005</p>
			Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2201 of SEQ ID NO:1079, b is an integer of 15 to 2215, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1079, and where b is greater than or equal to $a + 14$ .	
1080	H2CBE60	875551	than or equal to $a + 14$ .	<p>AA307347, R25920, D80022, D59859, AA305578, C14389, D80188, D59467, D51799, D80248, D80166, D51423, D59619, D80210, D80240, D80253, D81030, D58283, D59275, D80212, D80366, AA305409, C14331, D80219, D80043, D80195, D80522, D80391, D80164, D59787, D80227, D59502, C14014, D57483, D59610, D81026, D80269, D80024, AA514186, D59889, D80196, D80133, D59927, C15076, D80038, D50979, D51022, D50995, D51060, D80193, D80045, AA514188, D80251, D80241, AW360811, D80378, AW377671, AW177440, D80268, C14429, AW178893, T03269, AW375405, AW360844, D80439, D80302, C75259, D80247, AW179328, AW366296, AW177501, AW177511, AW360817, AW375406, AW378534,</p>
			Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 585 of SEQ ID NO:1080, b is an integer of 15 to 599, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1080, and where b is greater than or equal to $a + 14$ .	

	AW352171, AW179332, AW377672, AW179023, AW178905, C05695, AW178906, AW178754, AW179024, AW377676, AW378532, D59373, AW177505, AW360841, AW179020, AW178775, AW178909, D80134, AW177456, D51250, AW352170, D80132, AW177731, AW178907, AW178762, D58253, AW179019, AW179018, AW352158, AW178971, D51759, D80157, AW352117, D51103, AW367967, AW369651, AW179004, AW179329, AW179012, AW178980, AW177733, AW378528, AW179007, AW178908, AW178983, AW352174, D52291, AW176467, AW179017, AW179009, F13647, AW178914, AW378543, AW378525, AW352163, T11417, D80168, AW352120, T48593, D81111, D59653, C06015, C14298, D58246, AW178774, AW178781, AW178911, AW378540, AW177722, AI910186, C14227, AW177728, D59503, D80064, D45260, D58101, AW360834, AI905856, D59627, C14407, Z21582, H67866, D80258, H67854, T03116, AW178986, AW367950, C03092, AW177723, AI525923, AA809122, D59317, AI535850, AW177734, AI525920, AI525917, D51221, D51213, AI557751, D59474, D45273, AA514184, AW177508, D80014, AW177497, C14957, C14973, C14344, AW378533, AA285331, D51097, D60010, AI557774, AI535686, H67858, T03048, AW179013, D59551, AI525235, AI525912, T02974, AW178759, AI525227, Z30160, C14046, D60214, AW378539, AI525215, AI525242, AW378542, C16955, AI525925, AI525222, Z33452, C05763, D31458, AI525216, T02868, AW360855, AI525237, D80007, AF055668, AF055669, AR008278, A62298, AB028859, AJ132110, AR018138, A84916, A62300, AF058696, A82595, X67155, Y17188, D26022, Y12724, A25909, A67220, D89785, A78862, D34614, A94995, AR060385, AB002449, AR008443, D88547, I50126, I50132, I50128, I50133, AR016808, X82626, AR066488, AR016514, AR025207, AR060138, A45456, A26615,



1081	HWMCK4 5	875552	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 628 of SEQ ID NO:1081, b is an integer of 15 to 642, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1081, and where b is greater than or equal to a + 14.</p>	<p>AR052274, Y09669, A43192, A43190, AR038669, AR066490, AR066487, A30438, I18367, X64588, I14842, AR054175, D50010, Y17187, AR008277, AR008281, A63261, X68127, AR008408, AB012117, AR062872, A70867, AR016691, AR016690, U46128, D13509, A64136, A68321, I79511, AR060133, A85396, D88507, AR066482, A44171, A85477, I19525, A86792, I32384, X93549, U79457, AF123263, AR032065, AR008382 W44982, AC003042</p>
1082	HKAFL60	875553	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 556 of SEQ ID NO:1082, b is an integer of 15 to 570, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1082, and where b is greater than or equal to a + 14.</p>	<p>AI871640, AI809329, AW293495, AI631630, AA731792, AA809789, H97646, AA564836, AI913067, AL117328</p>
1083	HUSXP66	875554	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a</p>	<p>AI800576, AI376958, AI087840, AW069881, AI038673, AW339528, AW440579, AI057432, AI800751, AW371940, AA580863, R06900, AA026058,</p>

1084	HTLEY14	875556	<p>nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 661 of SEQ ID NO:1083, b is an integer of 15 to 675, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1083, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 614 of SEQ ID NO:1084, b is an integer of 15 to 628, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1084, and where b is greater than or equal to a + 14.</p>	AA252326	<p>AI631620, AL038838, AL038983, AL038822, AL037436, AI142134, AL040617, AL044186, AL041238, AL047012, AL044037, AL038532, AL047170, AL040463, AL037727, AL040576, AL045753, AL041752, AL045684, AL040625, AL047219, AL044162, AL041602, AL043492, AL040839, AL043677, AL040193, AL043467, AL040510, AL040621, AL043538, AL047183, AL043496, AL040464, AL046442, AL041635, AL045817, AL041133, AL041324, AL040322, AL041098, AL044074, AL040119, AL041955, AL040294, AL043923, AL043814, AL041096, AL043845, AL045920, AL041163, AL047057, AL037435, AL044064, AL040149, AL041459, AL041730, AL041523, AL041159, AL041577, AL040472, AL038761, AL043627, AL040052, AL037295, AL041374, AL041292, AL041358, AL046850, AL040444, AL041296, AL040768, AL040332, AL043848, AL041142, AL042135, AL043570, AL041346, AL046994, AL041086, AL046914, AL040529, AL040370, AL040745, AL046330, AL041197, AL039316, AL046392, AL040128, AL044272, AL134524, AL045671, AL047036, AL041233, AL040342, AL037343, AL037335, AL044258, AL040148, AL040553, AL040458, AL044187, AL044199, AL037323, AL044125, AL049018, AL040285, AL045990,</p>
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		AL046327, AL041277, AL040091, AL037443, AL040155, AL041347, AL041131, AL039744, AL041168, AL044165, AL044274, AL040571, AL039338, AL041051, AL040168, AL039643, AL079878, AL040075, AL045989, AL041186, AL039432, AL042096, AL041246, AL040414, AL040253, AL041227, AL040090, AL043775, AL044201, AL043941, AL037341, AL041140, AL045857, AL040082, AL041278, AL040329, AL043444, AL079852, AL045725, AL039915, AL043612, AL040255, AL040238, AL040263, AL039360, AL042898, AL045328, AL037279, AL041210, AL049069, AL044529, AL047037, AL043537, Z30131, AL038745, T23957, T23985, AL080031, AL046147, AA585439, AL045211, Z28355, AA585101, AI541365, AI525556, AI541374, AI540967, AI525431, AI541523, AI541514, T23888, T11028, R29445, R28735, T41289, D61254, AI547039, AI557731, AI526073, AL134110, R29177, AA585453, AI525320, AL047163, AA585476, AI525306, AI541535, AI546855, AA174170, AI556967, AI541509, AI546828, AI535639, AI557262, AI526194, AI526140, AI541017, AI541013, AI541508, AI547295, AI546891, AI557787, AI525316, C16305, AI546999, AL045327, AL041344, AI541510, C16300, AI541390, AI557799, AI557807, D57491, AI541307, AL043440, R29218, C15189, AL036259, AL046097, AI525321, AI525328, AI526187, AI526184, AI557238, AI546945, AL040385, AA585438, D55233, C14723, AA585434, AI526144, AA585356, AI546899, AI546875, AL045994, AJ239433, AI557796, AI541534, AI526176, AA585440, AR064707, I15717, I15718, I08395, M28262, E13740, AJ244003, AJ244004, E03627, I48927, AJ244005, I08396, A60212, A60209, A60210, Y16359, A60211, A98767, D78345,

A93963, A93964, AR062872, I63120, AR017907,  
AR062873, AR062871, A25909, I06859, A18050,  
A23334, A75888, I70384, A90655, A02712, A60111,  
I84553, A23633, AR007512, AF082186, A81878,  
I84554, A77094, A77095, AR031566, A85395,  
A85476, I00682, A95051, A18053, A86792, A20702,  
A64973, A35536, A35537, X83865, A11623, E00609,  
A11624, A43189, A43188, A20700, A02135, A04663,  
A02136, A04664, A84772, A11178, E01007, A98420,  
A98423, A98432, A98436, A98417, A98427, A84776,  
A84773, A84775, A84774, I13349, A10361,  
AR067731, AR037157, AR054109, AR067732, A58522,  
AR038855, AR043601, A11245, A91750, I44681,  
I03331, A02710, E12615, I18895, AR035193,  
A92133, E14304, A07700, A13392, A13393, I62368,  
AR031488, I13521, I52048, A27396, A91965,  
E16678, AR027100, I49890, I44531, I28266,  
I21869, I44516, A70040, A82653, AF149828,  
E16636, A95117, A93016, A24783, A24782, A58524,  
I05558, A58523, I01995, I25027, I26929, I44515,  
I26928, I26930, I26927, I08051, I60241, I60242,  
AR038762, A20699, E00696, E00697, AR009151,  
I66485, I66487, E03813, I66482, I66483, I66484,  
I66498, I66497, I66496, AR038066, AR027099,  
I66486, AJ230935, AR051652, AR051651, AJ244007,  
AJ230902, AR008429, A22738, I08389, X07299,  
D13316, AJ230972, AB025273, U94592, D50010,  
AJ230951, AR051957, AJ231009, Y09813, AJ238010,  
E12584, X81969, I19525, AR066494, Z32836,  
AR035975, AR035977, I18302, D13509, A70872,  
AJ231028, E17098, I66495, I66494, A22734,  
AR022273, AJ230867, AR035974, AR035976,  
AR035978, A70869, AL137394, AB014583, AL080126,  
AJ230845, I36244, AR051864, D17247, AR051865,  
A93923, A06631, S60422, AJ231011, A93916,  
Y14219, AR063812, A24548, A24546, I05845,

1085	HOFMV44	875558	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1342 of SEQ ID NO:1085, b is an integer of 15 to 1356, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1085, and where b is greater than or equal to a + 14.</p>	<p>A93931, A16035, AJ230996, I03669, I03668, I33632, AR009152, A68112, A68104, I15353, A85203, I66481, A83642, A83643, I66488, E03654, I66489, I66490, I66491, I66492, I66493, AR054723, A05993, A05975, A05973, A05991, A05995, A83151, AR023813, AL133053, AL122101</p> <p>AA459463, AI219490, AA705318, AA459242, AA574007, N44974, N33185, AI246251, AW270960, W96335, AI247249, AW118922</p>
1086	HSLJN60	875559	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 689 of SEQ ID NO:1086, b is an integer of 15 to 703, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1086, and where b is greater than or equal to a + 14.</p>	<p>AA043203, AA633788, AA779964, AA077596, AA993172, AA721605, AA993810, N58116, W02490, AA250756, AA410936, AA812535, AW105026, AA978273, AA912417, AI015512, AA323882, N74558, AC002542</p>
1087	HCQAG54	875560	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 465 of</p>	<p>T59843, AA664394, AA224827, T59708</p>

1088	HHMMD6 0	875563	SEQ ID NO:1087, b is an integer of 15 to 479, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1087, and where b is greater than or equal to a + 14.  Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 428 of SEQ ID NO:1088, b is an integer of 15 to 442, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1088, and where b is greater than or equal to a + 14.	AI926573, AI733887, AI732593, AA132660, AA132832, AC006449
1089	HWLMB59	875564	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1060 of SEQ ID NO:1089, b is an integer of 15 to 1074, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1089, and where b is greater than or equal to a + 14.	AA418204, AI133717, AA007464, AA279666, AA281169, N78164, AC006059, AF184110
1090	HUFAU68	875565	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1149 of	T12323, H54278, AA032022, Z19186, R92145, T19706, AA344428, AA031911, AW302758, AW187983, AB033011

1091	H2LAX58	875567	<p>SEQ ID NO:1090, b is an integer of 15 to 1163, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1090, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 757 of SEQ ID NO:1091, b is an integer of 15 to 771, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1091, and where b is greater than or equal to a + 14.</p>	<p>AA315557, AI632010, AI816905, R10787, D80166, D80212, D80022, C14389, C14331, D59619, D80210, D80240, D80219, D59502, D58283, D81030, D59859, D80043, D80195, D80391, D80164, D59787, D51423, D51799, D59275, D80253, D80227, D80193, C15076, D80196, D80045, D80188, D59467, D59927, C14429, D57483, D80269, D80366, D80038, D50979, D59889, R10697, D50995, AA305409, D59610, D80378, D80024, D80241, T03269, AW178893, D51060, C75259, C14014, AW178775, D51022, D80268, D81026, AW179328, D80134, AW177440, AW378532, D51250, D80522, AA305578, D80168, AW352158, D80949, F13647, AW369651, D59695, D80064, D80251, D80248, Z21582, D58253, AW178762, C14298, AA514188, AW177501, AW177511, C14227, D80133, D81111, C14407, AI910186, AA514186, AW352117, AW360811, D80132, AW378540, AI905856, AW377671, C05695, AW176467, AW375405, AW360844, AW179012, AW366296, AW360817, D80439, AW375406, AW378534, AW352171, AW179332, AW377672, AW179023, AW178905, AW177505, AW377676, D80247, AW178754, AW179024, AW352170, AW360834, D59373, AA285331, D51097, D80302, AW360841, AW179020, AW178909, AW177456, AW178906, AW177731, AW178907, AW179019, AW179018, AW178971, AI557751, D80157, AW352174, AW179004, AW179329, AW178980, AW177733, AW378528, AW179007, AW178908, T11417, AW179220, AW177714, C14077, AW179017, AW179009, AW178914, AW378543, AW378525, D51103, D51759, AW367967, AW177722,</p>
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1092	HCRQD82	875570	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 743 of</p>	<p>D80014, T03116, AW178983, AW352120, AW177728, AW178774, AW178781, AW178911, AW352163, D58101, D59627, D59503, D58246, D59653, T48593, D80258, C06015, D51213, AI557774, C03092, AW177723, AW378539, H67866, D45260, AI535850, AI525923, T02974, C14975, AW378533, AW367950, AW178986, H67854, AA809122, AW177734, C14344, AW177508, C14046, AW177497, D45273, D80228, AI525917, D59317, C14973, D60010, D51221, H67858, D59474, AI525920, AI535686, AA514184, AW179013, D59551, AW178759, T03048, F13796, C14957, D60214, AI525227, AI525235, AI535961, C16955, Z33452, AI525242, AI525912, AW378542, C13958, AI525925, A62300, A84916, A62298, AJ132110, AR018138, X67155, Y17188, A67220, D34614, D26022, A25909, D89785, A78862, I82448, AF058696, D88547, AR008278, X82626, AB028859, AR025207, Y12724, AB012117, A82595, X68127, A94995, AR060385, A85396, AR066482, A44171, AB002449, A85477, AR008443, I19525, A86792, U87250, X93549, I50126, I50132, I50128, I50133, AR066488, AR016514, AR060138, A45456, A26615, AR052274, I14842, Y09669, A43192, A43190, AR038669, AR066490, AR066487, AR054175, A30438, I18367, D88507, D50010, Y17187, AF135125, A63261, AR008277, AR008281, AR008408, AR062872, A70867, AR016691, AR016690, U46128, D13509, AB033111, A64136, A68321, AR060133, I79511, X72378, AR064240, U87247, I32384, AB023656, U79457, AF123263, AR032065, X93535, AR008382, AW206804, AI337160, AI744024, H11326, AA886435, F10033, AA255487, AI499829, AW188608, AA508761</p>
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1093	HCRPV05	875572	SEQ ID NO:1092, b is an integer of 15 to 757, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1092, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 619 of SEQ ID NO:1093, b is an integer of 15 to 633, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1093, and where b is greater than or equal to a + 14.	AI955141, AI744943, R16287, R15781, AI440022
1094	HHECM62	875573	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 534 of SEQ ID NO:1094, b is an integer of 15 to 548, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1094, and where b is greater than or equal to a + 14.	AI732599, AA132796, AW205259, AA885330, AA769901, AI609831, AW087786, AI423901, AA313420, AI791778
1095	HFOXW88	875574	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 846 of	AA146968, AA699958, AA700342, AI378339, AA146969, R07642, R07689, AC006344

1096	HWLXTI7	875578	<p>SEQ ID NO:1095, b is an integer of 15 to 860, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1095, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1740 of SEQ ID NO:1096, b is an integer of 15 to 1754, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1096, and where b is greater than or equal to a + 14.</p>	<p>AI279511, AI679970, AA968450, AW081381, AI371994, AW450638, AI679532, N90808, AA399120, AA448632, AA398186, AA807135, R61258, AA769230, Z33585, R61259, AA746649, H10077, AA598764, R58928, AI700380, AL117693</p>
1097	HODAY72	875583	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 760 of SEQ ID NO:1097, b is an integer of 15 to 774, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1097, and where b is greater than or equal to a + 14.</p>	<p>AA682526, AI702143, AC006352</p>
1098	HCQBI56	875584	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 150 of</p>	<p>D44721</p>

1099	HTTCM45	875585	SEQ ID NO:1098, b is an integer of 15 to 164, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1098, and where b is greater than or equal to a + 14.  Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 562 of SEQ ID NO:1099, b is an integer of 15 to 576, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1099, and where b is greater than or equal to a + 14.	AL133757, M78501	
1100	HARNM58	875587	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 815 of SEQ ID NO:1100, b is an integer of 15 to 829, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1100, and where b is greater than or equal to a + 14.	AI640555, AW341429, AA010805, AW450715, AI040419, AI167746, AI123802, AA677191, AA972603, AI342357, AI050710, AI636070, AI636093, AW104447, AA011210, AW103112, AA625985, AI050704, H95386, W31489, AW452276, R43183, R45091	
1101	HMIAQ09	875588	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1006 of	AI433411, AA772279, AA931112, AI580387, AW182214, AW444853, AW236085, H84320, AA384441, AA309603, H84319, AA991549, AL133615	

1102	HE9MD57	875589	SEQ ID NO:1101, b is an integer of 15 to 1020, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1101, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 579 of SEQ ID NO:1102, b is an integer of 15 to 593, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1102, and where b is greater than or equal to a + 14.	AA224205, AI750792, AI384092, AI827513, AI750808, AI081591, AA333825, R32422, R76408, AA682395, R06653
1103	HCQDA63	875590	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1415 of SEQ ID NO:1103, b is an integer of 15 to 1429, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1103, and where b is greater than or equal to a + 14.	AI522107, AI378319, AA234318, AI692527, W38548, AI290259, AI470641, R19919, AA234561, AA973961, F11345, F09005, R45139, AI470879, AW132159, AA482991, AA988920, AA146698, H59248, H28631, H28612, AA205262, N56056, N90091, AA095089, H68801, AI341225, AW001798, AA205188, AC004067, AC002091, AC003695
1104	HWLRO57	875594	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 713 of	H13920, R82788, Y15909

1105	HHEQO60	875596	<p>SEQ ID NO:1104, b is an integer of 15 to 727, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1104, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 591 of SEQ ID NO:1105, b is an integer of 15 to 605, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1105, and where b is greater than or equal to a + 14.</p>	<p>AI638800, AI701032, AI568329, AI225238, Z82200</p>
1106	HMUBG89	875597	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 791 of SEQ ID NO:1106, b is an integer of 15 to 805, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1106, and where b is greater than or equal to a + 14.</p>	<p>H98768, AI300431, AI076535, AI082879, AI689961, H03865, AI701454, AI458282, N33061, W07734, AI263212, R46614, T67479, AI991356, AI654356, N78714, AI696043, N23489</p>
1107	HDPRN70	875598	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 341 of</p>	

1108	HCRMC33	875600	<p>SEQ ID NO:1107, b is an integer of 15 to 355, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1107, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 433 of SEQ ID NO:1108, b is an integer of 15 to 447, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1108, and where b is greater than or equal to a + 14.</p>		
1109	HROBR56	875604	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 788 of SEQ ID NO:1109, b is an integer of 15 to 802, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1109, and where b is greater than or equal to a + 14.</p>	<p>AI657019, AI623299, AA393186, AA398646, AI263831, AA364607</p>	
1110	HWLMU3 3	875605	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 444 of</p>	AA126535	

1111	HCRQC94	875606	SEQ ID NO:1110, b is an integer of 15 to 458, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1110, and where b is greater than or equal to a + 14.  Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 740 of SEQ ID NO:1111, b is an integer of 15 to 754, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1111, and where b is greater than or equal to a + 14.	AA533280, AI133211, AW275798, Z28740, H79608, Z99396, AW392670, AL119457, AW372827, AL119497, AW384394, AL119484, AL119391, AL119319, AL119483, AW363220, AL119324, AL119443, U46350, AL119522, AL119355, AL119363, U46351, U46341, U46349, AL119341, AL036418, AL038837, AL119335, AL119418, AL119396, AL119496, U46347, AL037051, AL042965, AL036725, AA631969, U46346, AL119444, AL037205, AL119439, AL134538, AL036858, AL134531, AL119401, AL134532, AL134533, AL134536, AL042614, AL042542, AL036924, AL042975, AL043029, AL042984, AL119399, AL134920, U46345, AL042544, AL043019, AL038509, AL042551, AL037085, AL043011, AL042450, AL037094, AL043003, AL037526, AL036196, AL037639, AL036268, AL037082, AL036767, AL036190, AL037077, AL119464, AL036774, AL038520, AL036998, AL038851, AL038447, AL036733, AL037178, AL036238, AL036719, AL037615, AL037027, AL036765, AL036191, AL036679, D63477, AR066494, AR060234, A81671, AB026436, AR023813, AR064707, AR054110, AR069079 N70420
1112	HCRMQ55	875608	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 610 of SEQ ID NO:1112, b is an integer of 15 to 624, where both a and b	

1113	HSAZF81	875609	<p>correspond to the positions of nucleotide residues shown in SEQ ID NO:1112, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 646 of SEQ ID NO:1113, b is an integer of 15 to 660, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1113, and where b is greater than or equal to a + 14.</p>	<p>AI863439, R11144, AI360315, AA203688, H24452, R11145, R01108, AW002361, Z41757, AW295865, AI961650, AI052438, AW131513, AW089844, AI688241, AW080746, AW163834, AI886884, AI076157, AI270183, AI918677, AI696603, AI499963, AI364167, AI470717, AW132056, AI524139, AA128660, AI872423, AI370623, AI927233, AW080700, AI281782, AA179186, AI582910, AW075382, AW004606, AI638644, AI522256, AW029489, AI439452, AI682798, AW188525, AI619820, AI621341, AA810605, AI554516, AA814343, AI868680, AW051088, AW084396, AA806720, AI590043, AI284084, AI926593, AI568293, W46513, AI698391, AW007580, AI866469, AI648699, AI561288, AW081515, AW129264, AW081349, AI628180, AW088560, AI909697, AI625226, AI559296, AI590227, AI932794, AW166583, T69241, AI633066, AI620864, AI561356, AI279677, AI633125, AI079226, AW087837, AI631273, AI538564, AI699175, AI915291, AW152182, AI434969, AI889862, AI696714, AW085734, AI434731, AI889189, AI678602, AI473536, AI338427, AI884318, AA745155, AI863319, AW081252, AI573164, AI520859, W74529, AI865906, AI912544, AI701097, AI571867, AI349482, AI439385, AW131282, AI499570, AI570056, AI699823, AI765103, AI918809, AI868931, AI333104, AW105296, AI553645, AI368943, AI934259, AI688300, AA836168, AW150750, AI888022, AI860027, AI270706, AI367680, AI630932, AI611738, A65341, AL137533, I89947, I33984, AF047716, A41579,</p>
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1114	HTJMO37	875610	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 503 of SEQ ID NO:1114, b is an integer of 15 to 517, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1114, and where b is greater than or equal to a + 14.</p>	<p>Z13966, U62966, AF199027, AR034821, L25851, AL050155, AR038854, AL122100, AL117587, AL137530, A77033, A77035, AL117460, Z97214, D44497, X95310, AL117636, A52184, X68560, S69381, X99971, AF116573, AF013214, AL080146, AF080068, Z82022, X59813, X66366, X66871, AL133665, AF183393, A58545, A23327, A76337, AL137271, E12806, AC006115, AL137711, AF185576, AF032666, A21103, AL133084, AL080159, AF059611, AL137478, AF106697, U73682, X52220, AL049557, AF167995, A86558, X61399, AF222801, AF061981, I32738, AF008439, AF118847, L10730, A76335</p> <p>AA252455, AI191596, AI216511, AI221932, AL044538, AL044537</p>
1115	HKCSA54	875611	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 872 of SEQ ID NO:1115, b is an integer of 15 to 886, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1115, and where b is greater than or equal to a + 14.</p>	<p>AA078787, AA664392, AA047305, AA078903, T82427, AA618308, AA047306, AC007688</p>

1116	HWLQA55	875612	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 301 of SEQ ID NO:1116, b is an integer of 15 to 315, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1116, and where b is greater than or equal to a + 14.</p>	<p>AI767589, AI732392, AW083534, AW007152, AW004781, AA053033</p>
1117	HWBDT63	875613	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 735 of SEQ ID NO:1117, b is an integer of 15 to 749, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1117, and where b is greater than or equal to a + 14.</p>	<p>AI273587, Z36969, AA132614, AA602080, AA629773</p>
1118	H2CBQ54	875625	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 702 of SEQ ID NO:1118, b is an integer of 15 to 716, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1118, and where b is greater than or equal to a + 14.</p>	<p>AA313350</p>

1119	HCQCX54	875628	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 348 of SEQ ID NO:1119, b is an integer of 15 to 362, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1119, and where b is greater than or equal to a + 14.</p>		
1120	HCQCG75	875629	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1234 of SEQ ID NO:1120, b is an integer of 15 to 1248, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1120, and where b is greater than or equal to a + 14.</p>	<p>AI131026, AA716622, AI057161, AA774194, AA156854, AA225603, AA716534, AA213506, AI742559, AI820099, AA643860, AA343612, AW294591, AA636011, AI440145, H21764, AA716363, AA362352, AA352145, R64559, AA076494, Z95114, Z82215, AF070675</p>	
1121	HHEZN36	875630	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 709 of SEQ ID NO:1121, b is an integer of 15 to 723, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1121, and where b is greater than or equal to a + 14.</p>	<p>AA402496, AI435815, AA505991, AI359093, AW197200, AA234622, AA402558, AA258509, H17033, R14272</p>	

1122	HPCIS18	875631	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 768 of SEQ ID NO:1122, b is an integer of 15 to 782, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1122, and where b is greater than or equal to a + 14.</p>	AA313376, AW296351, I68732
1123	HISAT54	875632	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 754 of SEQ ID NO:1123, b is an integer of 15 to 768, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1123, and where b is greater than or equal to a + 14.</p>	AI913155, AI672147, AI935812, AI742124, AI953577, AI378301, AI420915, N32927, AI985091, AI633160, AA724413, AA913627, AA025763, AI569838, AI867104, AA447105, AI267291, N42073, AI963746, AA707999, AI473202, AI379471, AI383622, AA025951, AI675725, AW149902, AI114877
1124	HLWAC54	875633	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 260 of SEQ ID NO:1124, b is an integer of 15 to 274, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1124, and where b is greater than or equal to a + 14.</p>	AF130356, AB026118

1125	HKMAB82	875634	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1121 of SEQ ID NO:1125, b is an integer of 15 to 1135, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1125, and where b is greater than or equal to a + 14.</p>	<p>N28667, AI659988, AI082031, AI693456, AI880139, AA581592, H73764, H16504, AI871552, AI002235, AA350218, H05516, AI268133, R46302, AI417378, AA418492, AI278150, AA418394, R46207, AI281736, AI027423, R15667, AA355971, H74147, AW195643, AI478495, R62421, R62495, AW453056, AA507440, W21975, AA364092, AC006312, AF055899</p>
1126	HPVAB96	875635	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 432 of SEQ ID NO:1126, b is an integer of 15 to 446, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1126, and where b is greater than or equal to a + 14.</p>	<p>AA219147, AI884470, AA464382, AC006475, AL009051</p>
1127	HBMXS53	875636	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 559 of SEQ ID NO:1127, b is an integer of 15 to 573, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1127, and where b is greater than or equal to a + 14.</p>	<p>AA810265, AA897140, AI656737, AA768557, AA767085, AI969070, AA847937, AC005018</p>

1128	HCFC58	875638	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2215 of SEQ ID NO:1128, b is an integer of 15 to 2229, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1128, and where b is greater than or equal to a + 14.</p>	<p>AI373860, AI142548, AI160244, AI803364, AA732841, AI435516, AI095583, AI076620, AI167180, AI936640, AI339776, AA969232, AW137670, AI391504, W68702, AW207539, W79914, AA917467, AI459137, AI148710, AA287408, AI762559, AI040652, AW026057, AA522920, AA866005, AI016161, AA055361, AA625635, W23647, AA707093, AA913826, AI083994, AI015839, W69531, AI796928, AI890078, AI830098, AA937098, AA305157, AI581290, C01766, AI050874, AI199472, AI097584, H92773, AI074517, AI074538, AI151312, AW028614, AI674344, AA305656, AI990059, R62238, AI095293, AI052777, AA287357, AI085262, AI354825, AA282043, AI828501, AA989141, AI936558, AA917921, AW207658, AA581990, H66449, AI809556, H66448, AI087807, AA976485, AI089883, AI161211, AW102710, AI370809, AA282205, AA358542, AW054857, AA810757, F13499, AA876563, AA215693, AI084131, AI828164, W74293, F22539, AI870008, AI671095, AA476727, AA404240, AA831950, AA026585, AA370269, AI359885, AA631293, AW340672, AL121501, N31738, D19607, AA423998, W68795, AW301681, AA037423, AA744671, AI498589, AA705091, AI185927, AA425621, W24523, R83202, AW072175, AA886734, AI568422, AI128796, AI423010, W39033, N92339, N27093, AI906207, AI354764, AI829997, AI216318, AI292222, W24115, AI700186, AW166486, AI808019, AI417379, AI274365, AI192992, AA327411, AI801970, AI560400, AI334057, AW205138, AW135446, AI356227, AI418487, AI334250, AI301676, Z39418, AW206667, AA026695, AA449697, AA307877, W69448, AW136707, AI356196, AI858772, AI268621, AW054727, AW206873, AI077709, AW300595, AI394380, AI369492, AI300626, AI702163, AW137374, AI366348, AW137612, AW104420,</p>
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				AI354931, AI349587, AW072219, AI300618, AA362894, AI356229, N92547, AW083322, AW138524, AA906922, R21738, AA448971, AA928281, AI824781, AW404514, F10607, H92884, AW104623, AA974162, AA055693, AA282321, AI191199, W78149, AA026665, AI243453, AA884305, AI471239, AA907645, R05573, AI702878, AI953829, AA972477, AA912803, N91937, AA370270, R83201, AA026584, AI610796, AI624790, AI367991, AW089151, AA367748, T12621, AI250112, AW072490, D80024, D58283, D51060, D80522, D59275, D80133, C14331, C14389, D59859, D80043, D81026, D80022, D80248, D80366, D51022, D51799, D59610, D80269, D80253, D51423, D57483, D50979, D80166, D80195, D50995, D59467, D59619, D80210, D80391, D80164, D80240, D59787, D80227, D59502, D81030, D80212, D80196, D80188, AW377671, D80219, C14014, AA305409, D80251, AJ132110, A62300, AB028859, AF058696, A62298, AR018138, A84916, AR008278, A82595, AB002449, X67155, AR060385, Y17188, D26022, Y12724, A25909, A94995, A67220, D89785, A78862, D34614, AR008443, I50126, I50132, I50128, I50133, D88547, AR066488, AR016514, AR060138, A45456, A26615, AR052274, X82626, AR054175, Y09669, A43192, A43190, AR038669, AR066487, I14842, A30438, AR025207, Y17187, A63261, D50010, AR008277, AR008281, AR062872, A70867, AR066490, I79511, AR016691, AR016690, U46128, X68127, AR008408, I18367, X64588, I82448, AB012117, D13509, A64136, A68321, AR060133, AF123263, Z82022, A85396, D88507, AR066482, A44171, AR032065, A63887, AR060382 W91924, AW197110, AI741307, AI378575, AA713480, AI690421, AI699132, N68496, AI567731, AI928419, W91925, AI932938, AA026893, R92744, AI935511, AI242962, AI952546, AW384749, AA036709,
1129	HPMK129	875639	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by	

1130	HMWFZ60	875640	<p>the general formula of a-b, where a is any integer between 1 to 935 of SEQ ID NO:1129, b is an integer of 15 to 949, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1129, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1404 of SEQ ID NO:1130, b is an integer of 15 to 1418, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1130, and where b is greater than or equal to a + 14.</p>	<p>AI659575, AW384762, AF176699, AL022395, AF174590, AF199355</p> <p>AL135393, AI743624, AW007692, AI809103, AI693085, AW188260, AI628632, AA151384, AW170431, AI688464, AI884841, AA044177, AI435463, AI760308, AA641945, AI911252, AI808553, AA433872, AI597697, AA532734, W57862, AI187076, AI493091, AI624308, AA909039, AA856988, AA912119, AA099566, AA314491, AA603118, W60385, AI817675, AI804736, AI141817, AA635102, AA012931, AA831200, AA872405, AA099656, AW374351, AA317881, AW270235, AI128006, AA044362, AA971272, N53760, N73118, AI092800, AI125656, AA307420, AA299867, AI092789, AI087152, AI698768, AI075446, AI827489, AA909444, AI310357, W60294, AA557616, AI401792, H71979, AI201315, R91255, R53622, W57788, AA905502, AI080642, AI953627, AA040065, N49849, R51953, AI039773, R44774, AI354614, AI695145, W52685, AA641347, AA230242, AA311605, AA485131, N33951, AA001274, AA001885, AA130833, R91256, D31320, AA676280, AA947975, AA299866, AA888090, AA055655, AI028370, AA485132, AA076953, N71776, H67264, AW087608, R25747, R85994, N49662, AA382910, R40695, AI433728, AA402168, R13260, AA402822, AA502327, AA515875, AW004807, AA627525, AI826454, AA319306, AA082526, AA151383, AA074596, AA494303, R19108, AW235427, R26592, AA702744, AA130948, AI419583, AI538143, AA230299, AI656420, AA588457, N67517,</p>
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1131	HUCPH16	875641	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1648 of SEQ ID NO:1131, b is an integer of 15 to 1662, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1131, and where b is greater than or equal to a + 14.</p>	<p>AI262101, AI538153, AA078050, AC005074, AF084479, AF072810, AB032253</p> <p>AI694079, AI469419, AA521321, AA621120, AI873548, AW162015, N24406, AI745250, AI816009, AI034067, AA861921, AA994985, R91349, AA732547, H99156, AA429548, R91302, AI809579, AA921820, AI471875, AA910181, AL042168, AA741400, AF071771, U09850, AF011758</p>
1132	HCUDA52	875642	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 373 of SEQ ID NO:1132, b is an integer of 15 to 387, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1132, and where b is greater than or equal to a + 14.</p>	<p>AA834872, F30466, F36527, F01431, AA564994, AW394057, AF001548, AC005340, AC005934</p>
1133	HTWCN56	875646	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 68 of SEQ ID NO:1133, b is an integer of 15 to 82, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	<p>AL042551</p>

1134	HWLUF58	875650	<p>NO:1133, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 792 of SEQ ID NO:1134, b is an integer of 15 to 806, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1134, and where b is greater than or equal to a + 14.</p>	<p>AI148558, AI991236, AI346818, AA528254, AA573948, AA582937, AA148254, AW009953, AA278825, AI262374, AA148255, AW337649, AW292443, AI879821, AA568456, AA769741, AA441911, AA928164, AI277160, AI368975, AA442018, H16108, AI024901, W17108, AI910530, AI675866, AA278827, T25032, AA282250, AB023416</p>
1135	HWLMI53	875651	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 625 of SEQ ID NO:1135, b is an integer of 15 to 639, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1135, and where b is greater than or equal to a + 14.</p>	<p>AI148558, AI991236, AI346818, AA528254, AA573948, AA582937, AA148254, AW009953, AA278825, AI262374, AA148255, AW337649, AW292443, AA769741, AI879821, AA568456, AA441911, AI277160, AI368975, AA928164, AI024901, AI910530, AI675866, W17108, T25032, AA442018, AA282250, H16108, AB023416</p>
1136	HWLMB54	875653	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 428 of SEQ ID NO:1136, b is an integer of 15 to 442, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	<p>AI656739, AW194261, AI191572, AI686332, AW241658, AI081504, AA287936, AW439964, AI147409, AI073550, AI627477, AA570523, AI149073, N23389, AW148760, AI952927, AI039002, AW170120, AI953877, AI478397, AI203256, AA057114, AI077376, AL043541, AI631759, AI302584, R46593, AA776807, AI471297, H08065, AI825574, AI000483, AI474396, AA993288, R60870, R49614, D63065, AI188876, AI471175, AI565375, R42276, AW130341, AI381205, AA025481, D60482,</p>

1137	HOEEY53	875654	<p>NO:1136, and where b is greater than or equal to a + 14.</p>	<p>AI381203, AW135516, AW139222, AI864636, AI783564, AI439711, AI969032, AA828409, AI914914, AI302951, D62081, R38686, AI351832, FI0577, AA215377, R77944, R42277, AA170804, H24643, N71896, AA025591, H25840, H02001, N26541, R78406, C02270, AI298146, D79240, AA057854, AA288000</p>
			<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 659 of SEQ ID NO:1137, b is an integer of 15 to 673, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1137, and where b is greater than or equal to a + 14.</p>	<p>AL119748, AL040243, AL041862, AL045500, AW087445, AW071349, AL042745, AI433976, AI433157, AI702406, AI275175, AL042628, AI564719, AI521012, AL079977, AL049085, AI580190, AI500559, AW301409, AI620284, AA640779, AI539771, AI500077, AI538716, AL047763, AL045266, AL040169, AL042627, AL121270, AL119049, AW082113, AI469532, AI537677, AI818683, AI340582, AL121328, AL040097, AI436456, AL119791, AL036146, AI815855, AW074993, AW238730, AL121365, AI064830, AI349772, AI349256, AL036396, AI863014, AW117882, AA572758, AI207510, AI499463, AW103371, AI349645, AL042744, AL036361, AL038605, AL036403, AW071417, AI866457, AI349004, AL036802, AL045620, AI536685, AI500523, AL039276, AI919345, AW169671, AI497733, AI269862, AI567351, AL046926, AI284517, AA613907, AW268253, AI537515, AL036274, AI349598, AL045163, AL121463, AI340603, AW089572, AI687728, AI281779, AI440239, AI281773, AW302988, AI312428, AI783504, AI868831, AI524671, AI866608, AI590120, AI619502, AI802542, AW169653, AW026882, AL048656, AI475371, AI498579, AL119828, AI312152, AI345735, AI432656, AL079963, AI499393, AI349933, AI349937, AI364788, AI491776, AI824557, AI934036, AW162071, AI612913, AI801325,</p>

				AW148716, AI500706, AL048871, AI445237, AI348897, AW151138, AI440426, AI500662, AI687127, AI284509, AI499512, AI633493, AL135661, AL036980, AI857296, AI702433, AI521560, AW303152, AA508692, AI866573, AI434256, AI475817, AI815232, AI284513, AW148320, AI631107, AI800453, AI800433, AI888118, AI560012, AI285735, AI625079, AI635461, AI679724, AI920968, AL042551, F37439, AI690835, AI572787, AW075351, AW068845, AI648684, AW403717, AI687362, AW268220, AI610362, AI282655, AI872711, AW150578, AL047041, AI873731, AI499920, AI349614, AA427700, AA470491, AI432666, AI697137, AI929108, AL042787, AI636456, AI343112, AI608667, AW002342, AI475451, AI682841, AI224992, AI866780, AI799199, AI273142, AI282281, AI250293, AI269696, AI869367, AW104724, AI888661, AL042538, AI610307, AI340519, AL047042, AW074869, AI633419, AI866002, AW083804, AI922901, AI439087, AL120736, AI687415, AI610645, AW302965, AI590128, AW274192, AI491852, AI862144, AI285826, AI433037, AW161579, AI539153, AL043981, AW151485, AI554245, AI537244, AI274541, AI307708, AI446606, AA804740, AL120853, AI754897, AA225339, AL036631, AI445432, AL036759, AI254251, AI366549, AI309401, AI610429, AI889189, AW301300, F37471, AL120854, AI671679, AI568870, AI637584, AI758437, AI445025, AL038779, AW075413, AW020693, AI445165, AI580984, AI906328, AI554427, AI597918, AW082040, AL046849, AF090901, I48979, AF090903, AL050108, AF090934, U91329, AF113690, AF118064, I89947, AL117457, AF090943, AF113013, AL133640, AL137459,

AL133016, AF078844, AF090900, AJ242859,  
AL117460, S78214, U42766, AL050393, AL049452,  
AL050116, AL133557, AL050146, I89931, A08916,  
AL110196, AL122050, Y11587, S68736, AF017152,  
AL080060, AL133080, AF113699, AF104032, Y16645,  
Y11254, AF113691, AL110221, AF113694, A08913,  
AL049938, AL050149, I48978, L31396, L31397,  
AR011880, AL049466, AL137527, AL133606,  
AF118070, AF125949, AF106862, A93016, I33392,  
AL133075, AL133113, AF113677, AF097996,  
AL137557, AF079765, AR059958, AL050277,  
AL133093, AL096744, AF090896, AF113019,  
AL122049, AL117583, AB019565, AL122093,  
AL117435, AF113689, A08910, I49625, AL049464,  
AL049382, AL049314, X84990, E07361, E07108,  
AL049300, AF113676, AL080137, AF111851,  
AL137550, AJ000937, AL117585, AL122121,  
AF158248, AL133560, AL080124, AL122123, A65341,  
X63574, E03348, X70685, A08909, AL117394,  
AF017437, AF177401, AL133565, U00763, AL049430,  
AF125948, AF146568, AF091084, AL137463, A03736,  
U72620, AL137283, AL122098, AJ238278, AL110225,  
AL122110, X82434, A58524, A58523, AF118094,  
AL137538, AL050138, X72889, I09360, AL050024,  
A77033, A77035, E02349, AL137648, X65873,  
X96540, I03321, Z82022, AF183393, A12297,  
AL137271, AL080127, U80742, X93495, U35846,  
AL133072, AL137521, AF087943, AL049283, U67958,  
AL080159, X98834, A08912, AL110197, AL133077,  
AF061943, E08263, E08264, E15569, I42402,  
S61953, AF067728, AL133014, AJ012755, AL133568,  
I26207, AL137560, U78525, A93350, AF119337,  
AF111112, AR000496, U39656, AF081197, AR038969,  
AC006371, AL050172, AR054984, AF026816,  
AL137556, AL137523, I17767, AF026124, Y14314,  
AL137526, AF153205, AF008439, AL133104,

1138	HUCQC25	875658	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 544 of SEQ ID NO:1138, b is an integer of 15 to 558, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1138, and where b is greater than or equal to a + 14.</p>	<p>AL133098, U96683, AL137488, AF003737, AF185576, AL110280, AL133067, E05822, Z72491, AF079763, Y09972, AF081195, AF106827, A07647, M30514, AL122111, Z37987, E02221, AF057300, AF057299, AR013797, AF162270, U68233, I92592, A90832, E08631, A45787, AL117440, AL137476, AF000145, U68387, AR038854, U58996, I00734, X87582, L30117, E00617, E00717, E00778, Y07905, AC004200, AL080074, X83508, E04233, AJ006417, AF111849, U49908, AC007458, AL137533, AL133081, X92070, AF118090, AL117432, AL080158, AL137480, Y10655, AF095901, L19437, AF132676, AF061836, AF210052, AC002464, AL050092, AL137273, A08911 AA994842, AW081730, AA001654, AI420895, AL137442</p>
1139	HCRMS71	875661	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 775 of SEQ ID NO:1139, b is an integer of 15 to 789, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1139, and where b is greater</p>	<p>AI693010, AA715045, AI885216, AI207366, AI357907, AI784056, AA621429, AW293970, AW204373, R43334, AA523584, AA781484, N94933, AB007870, AF000899, AL035697</p>

1140	HWLMS13	875662	<p>than or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 816 of SEQ ID NO:1140, b is an integer of 15 to 830, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1140, and where b is greater than or equal to <math>a + 14</math>.</p>	<p>W32981, N46181, N46187, AA173644, AA352233, AA384809, R31168, W93675, U68494</p>
1141	HE6GF82	875663	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1096 of SEQ ID NO:1141, b is an integer of 15 to 1110, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1141, and where b is greater than or equal to <math>a + 14</math>.</p>	<p>AW003091, AA033907, AW292095, AW003066, AA994829, AA477259, AI203380, AW051389, AA481953, AW297105, AI168181, AI311568, AA402560, AI983314, AA402729, T32956, T15739, AI283188, AI206971, AI216276, AI285095, AA722476, R16257, F10673, AI88416, AA477907, AI424752, AW002217, AA082650, N83203, AA034007, AA701213, T47308, AI669678, F04444, AI868114, T47307, F01597, F01744, Z19661, AA041439, AW169604, AA455772, AW105601, AI587143, AI589267, AI340519, AI554821, AI682725, AI612885, AI784252, AI590423, AI288285, AI889168, AI345005, AI340511, AI799195, AI862144, AW059713, AI866465, AI310575, AI623746, AI887247, AI950664, AI340533, AI866770, AI273094, AA420722, N72726, AI890806, AL036664, AW075207, AI955906, AI343091, AI624056, AL036980, AI312428, AW268072, AI345735, AI811785, AI826225, AI431424, AL036631, AI307210, AW089471, AI500659, AI440263, AI313320, AW054931, AI340627, AW193134, AI379711, AI310504, AI312146, AI312339, AI345258, AI628296, AI349645,</p>

	AI470293, AW071349, AI916419, AW196299, AI311604, AI811353, AW151138, AI624953, AI890907, AI868204, AA012905, AL038605, AI634224, AW090726, AI306705, AI349957, AI817237, AI283941, AI798373, AI478639, AW022682, AI280747, AI862142, AI247193, AI538850, AI680113, AW071380, AI934036, AI963668, AI349028, AW191916, AI567971, AW170700, AI121496, AW193000, AI312152, AI345347, AI758437, AW075084, AI309443, AW196037, AW163834, AW118508, AI159837, AI348914, AI567612, AI349937, AW020693, AI354283, AL048644, AI689702, AI307543, AI334884, AI348897, AW151786, AI349598, AI307708, AI312325, AI270707, AI340659, AA761557, AW269097, AI310940, AW151136, AI445115, AI963224, AI313352, AI539771, AW072588, AI334930, AI307736, AW080279, AI471282, AI307520, AI917123, AI340603, AI889147, AI433384, AI499986, AI349186, AI537677, AW089572, AI445237, AI494201, AW083804, AI608667, AW191844, N71180, AA508692, AI345739, AW088037, AI312143, AI690748, AI440426, AI612750, AL119836, AI654601, AW059828, AI434256, AW131428, AI336495, N75771, AW301300, AI815232, AI801325, AA493647, AI500523, AI310582, AI915291, AI274541, AI623682, AI349955, AI582932, AI284517, AI923989, AW075093, AI564736, AI500706, AI491776, AW268067, AI521560, AI889189, AI500662, AI284509, AW172723, AA641818, AI433037, AI349246, AI623796, AW081449, AI866573, AA579232, AI343037, AI633493, AW161579, AA635382, AI349256, AI270055, AI567582, AI805769, W33163, AI251221, AI888661, AL036705, AW268253, AL046463, AW191003,



AI284513, AI362637, AI573026, AI888118,  
AL039086, AC006276, A74801, AL049314, A08916,  
AC004943, A08910, A08909, AF090943, I89947,  
AL049423, AF039138, AF039137, AF097996, E02349,  
AL049452, AF124728, U42766, I48978, A08908,  
AL133098, A08913, AL050146, I89931, Y11254,  
AR038854, I49625, AL122049, A07647, U80742,  
AJ012755, Y10080, AF079763, AL122110, AF091084,  
AL122050, AF118090, AJ242859, AL050108, X96540,  
AF026816, AL049464, AL110280, AF017437,  
AL117460, I66342, AL137463, AL137271, AL117394,  
AF111851, AR068753, M30514, X72889, A58524,  
A58523, AF119337, X70685, I03321, AF090900,  
U68387, A08912, AL110225, U91329, AF057300,  
AF057299, A93016, U00763, AF113694, AF118094,  
AL110196, AF106827, U58996, AF153205, A93350,  
AF061943, AR020905, AF113677, AJ000937, Y10936,  
AL133081, AL137459, AF111849, AL133557, E07108,  
AL050149, AL117435, U35846, A65340, AL049430,  
Y09972, L31396, A90832, L31397, AL080124,  
L13297, A65341, AL049466, AL117649, AL110221,  
AF113676, Y08616, AL050138, X83508, I00734,  
AF003737, AL137556, AL137526, AL049938,  
AL133080, I33392, AL133640, AL117583, AL117585,  
AF017152, X59414, E00617, E00717, E00778,  
AL133077, X86693, U78525, AL133113, AL133072,  
AL137480, AL122123, S78214, E07361, A18777,  
AR013797, AF113019, AL137283, AF175903,  
AL049283, AF069506, Z82022, AJ238278, Z37987,  
AL117457, AF177401, AL122093, AL137550, X93495,  
AL133606, AL137521, X98834, AF081195, AF113013,  
AL035458, AF078844, AF113690, AF126247, E05822,  
AL137560, Z72491, AF000301, AL137529, E08631,  
AF125948, AL049347, AF146568, A12297, AF061573,  
AR011880, I09360, AF067728, Y11587, I26207,  
AL122118, AF113691, AB019565, AL133104,

1142	HSPBC14	875665	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 392 of SEQ ID NO:1142, b is an integer of 15 to 406, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1142, and where b is greater than or equal to a + 14.</p>	<p>AL133067, AL050277, AL049300, AF118064, AL137557, AF118070, AF113699, AL137648, AL080158, AF125949, AL133568, AF090896, Y07905, X63574, I08319, AC009501, U72620, I89934, X82434, L10353, E04233, A77033, A77035, AL080159, AF087943, AR000496, U39656, I48979, AF183393, AF026124, AF090903, Y14314, AL133016, AL096744, AJ003118, AF158248, AL133014, AL133665, AL137476, AL133560, S61953, AL080086, AL137538, M86826, X84990, AL133075, AL050116, I09499, AL117440, AF185576, AL050092, AF079765, A03736, AJ006417, AL137292, AF106862, AC002467, I41145, AF162270, A08907, AF100931, AL137478, X62580, AF051325, AR038969, AF047443, AF061795, AF151685, A45787, AL137656, AF081571, T66716 AW439287</p>
1143	HOCNE41	875669	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 407 of SEQ ID NO:1143, b is an integer of 15 to 421, where both a and b correspond to the positions of</p>	<p>AW206400</p>

1144	HCQBE51	875672	nucleotide residues shown in SEQ ID NO:1143, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 252 of SEQ ID NO:1144, b is an integer of 15 to 266, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1144, and where b is greater than or equal to a + 14.	AL134350
1145	HWLMX4 0	875673	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 711 of SEQ ID NO:1145, b is an integer of 15 to 725, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1145, and where b is greater than or equal to a + 14.	AW248502, AA868598
1146	HCRMB51	875677	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 421 of SEQ ID NO:1146, b is an integer of 15 to 435, where both a and b correspond to the positions of	AA251591

1147	HGBBH61	875678	nucleotide residues shown in SEQ ID NO:1146, and where b is greater than or equal to a + 14.  Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 519 of SEQ ID NO:1147, b is an integer of 15 to 533, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1147, and where b is greater than or equal to a + 14.	AA664156, AA767729, AA402095, AI700767, AA401940, AI935241, AW269601, AA345071, AW363622, AW074281, AI888088, AA054585, AW371974, AW362940
1148	HCRNZ51	875680	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 382 of SEQ ID NO:1148, b is an integer of 15 to 396, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1148, and where b is greater than or equal to a + 14.	W24854, AA279745, H29979, AI370512, AI149061, AA401945, AW270474, AC002094, AL021393, AL133163, AC004601, AC006449, AC005684, AL139054, AL109798, AL121655, AL031591, AB023051, AC005249, AL033527, AL035587, AC004966, AC004491, AC002538, AP000512, Z83826, U95739, AC004675, AL031597, Z95152, AF088219, AC010582, AC007057, AL049872, AC000026, AL021939, AC007738, AC002059, AC006538, AC005792, AC009263, AL020995, AC002350, AC006166, AL008732, AL121587, AL079333, AC003071, AC006540, AP000694, AL031005, AC012384, AC002565, AC004263, AC005197, AP000697, Z83822, AL049776, AC006571, AL031056, AC007637, AC004106, AL021578, AC003101, Z84466, AC005952, Z93242, AC006160, AL024508, AP000152, AC007676, AC002365, AL049745, AC005207, AP000008, AC004895, AC005844, AC002119, Z95113, AC004253, AC004685, AF196972, AP000704, AF030453, AC005886, X94768, AL022336, AL049759, AL009181, AC005520, AC005088

1149	H2CAA51	875681	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 526 of SEQ ID NO:1149, b is an integer of 15 to 540, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1149, and where b is greater than or equal to a + 14.</p>	AA306969	
1150	HT3A155	875682	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1467 of SEQ ID NO:1150, b is an integer of 15 to 1481, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1150, and where b is greater than or equal to a + 14.</p>	<p>AI088910, AW043896, AA005100, AA262517, AI470354, W78980, R89654, AA261819, AI079770, AA037517, AA328236, AI584124, H19672, AI247711, AI217267, AL121782, AB034617, AL121754</p>	
1151	HLWBA37	875683	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1078 of SEQ ID NO:1151, b is an integer of 15 to 1092, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1151, and where b is greater than or equal to a + 14.</p>	<p>AI458851, AA142939, AA936413, AI741509, AI335942, AI002201, AA150633, AA446254, AW003610, AI091446, N62521, AI800649, AI880031, AA029154, AA776155, N31764, AA029051, N24835, AI610362, AI582932, AW075413, AI889189, AI433976, AA429993, AL045500, AI433157, AL042753, AI539771, AI923989, AI537677, AI500659, AI801325, AI500523, AI284517, AI500706, AI491776, AI445237, AW151138, AI521560, AI500662, AI284509, AI866573, AI633493, AI434256, AI888661, AI284513, AI888118, AI611738, AI251205, AI275175,</p>	

			AI434223, AI554821, AL042551, AI866510, AL036146, AI889168, AI620284, AI815232, AI340603, AI567360, AL046926, AL042787, AI440252, AI499463, AI890784, AW075351, AI800433, AW151136, AL079963, AI678357, AA938383, AW082113, AI270183, AI440239, AL041772, AL045266, AI269862, AI800453, AI537273, AL047763, AL040243, AI436456, AL042628, AI932794, AI963846, AI567940, AI345608, AW301410, AI817244, AI537515, AI612913, AI567993, AI285826, AI863014, AI475371, AI499512, AI889133, AI282281, AL043293, AI334884, AI610645, AI610402, AI917252, AI610429, AI349598, AI889148, AW074993, AI349614, AI364788, AI521594, AL042538, AI632408, AI572787, AA508692, AI312152, AI567935, AI869367, AI630928, AW129106, AL119863, AI432656, AI349937, AI348897, AI307708, AI796743, AI815855, AI538085, AI457369, AW148320, AI539028, AW073994, AI889953, AI281782, AI500077, AW238730, AI590830, AI802542, AW083804, AL042627, AA572758, AI499285, AW274192, AI950892, AL045620, F27788, N80094, AW071417, AI308032, AI345745, AI348854, AI344785, AI805769, AL036396, AI340582, AI866608, AI539847, AI432666, AI434468, AI890833, AI344817, AI926790, AI539632, AI564719, AI612885, AI591420, AI889376, AA420758, AI648663, AL038605, AI524671, AW051258, AW074869, AI873731, AI619502, AI677796, AW268253, AI922901, AI288305, AW118518, AL121496, AI866457, AI913452, AI570807, AW026882, AW050522, AI923370, AI345735, AI281772, AL121286, AI371251, AI345416, AI921248, AI345612, AW188539, AW301300,

	AI702073, AL079740, AI804983, AW269097, AI933589, AL042745, AW169653, AI648684, AW268220, AI334450, AI345415, AW117746, AI274508, AI476046, AI633125, AI345471, AW302988, AI886753, AI698391, AI312428, AI783504, AI572418, AI686906, AI654276, AI349645, AL119049, AI682743, AI866770, AI758437, AI433037, AI873644, AI627988, AI309401, AI343112, AI889147, AW148294, AW089572, AI498579, AI064787, AI349256, AL039276, AI805762, AL041862, AL039086, AL048496, AW059837, AI955917, AI620003, AI446538, AI499986, AI633419, AI554245, AI306613, AI349957, AI284131, AB032963, U72620, I48979, I48978, AF113689, I89947, A08913, X72889, AF090903, AL133565, A65341, I33392, A08916, AL110221, AF090896, AR011880, AR059958, X63574, A08910, L31396, A08909, Z82022, L31397, AF113699, AL117583, I89931, A03736, I49625, AL117457, AL117435, A77033, AF090934, AL050146, E03348, AL050138, AF113690, A77035, AL133016, AL022165, AL122110, S68736, AC006501, AF113677, AL049452, AF106862, AL137538, AF158248, U42766, AF090901, AL050393, AL133606, AJ012755, Y11587, AL049382, AL137459, U80742, AL122093, AL137527, AL080060, AF113019, X82434, AL133080, S78214, AL137271, AF183393, X93495, U35846, E07361, A58524, A58523, AL137550, AL133557, AF091084, AL050149, AF087943, E02349, AL133560, AL050024, AF118070, AL080159, AL049430, AL133640, AF113013, AJ242859, AF177401, AC007877, AF078844, AL122121, AL122049, AL049464, AL122050, X70685, AL117460, AL122098, AF113676, Y16645, AL137557, AL110196, AL050277, AL117585, AF146568, AL133113, AL122123, AF113694, AF017437, AF118064, AF097996, AL049938, U00763,

1152	HE2LP33	875687	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 520 of SEQ ID NO:1152, b is an integer of 15 to 534, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1152, and where b is greater than or equal to a + 14.</p>	<p>AF104032, AL080124, AL133072, AL049466, A08912, I03321, AF118094, AF090943, AF111851, AJ238278, AF125948, X65873, AF079765, AF067728, AJ000937, AF113691, AL133075, AL050116, AL050108, AL137463, AL080137, AB019565, AL049314, E07108, AF090900, AF125949, AF026816, AF003737, S79832, X84990, AF026124, AF061943, AL133093, AL049283, Y11254, A12297, A93016, U67958, AL137648, AF017152, AL080127, AL110225, AL117394, AF022363, AF162270, I42402, L30117, AL049300, AL137560, AL096744, AL137521, X96540, AC004383, I26207, AC007179, S61953, AF008439, I09360, E15569, U91329, AC004686, A93350, AF119337, AF110520, AC002464, AL110197, Z98036, AC004883, U96683, AL133077, AR038969, AL137283, AC006336, X98834, AC007748, AR000496, U39656, AL022147, AL050172, AF111112, AL137526, AL133568, E08263, E08264, U95739, AC006017, AF185576, AL137533, E04233, AF153205, AL133104, AF057300, AF057299, Y14314, AL110280, AL022723, AL117440, AL133014, AC004837, AR034830, I96214, AF106827, AC008394, E05822, AL133665, AF079763</p>
1153	HCRMN10	875688	<p>Preferably excluded from the present invention are one or more</p>	<p>AB021638, AB023431, AC005954</p>



1154	HKMMR6 I		<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 387 of SEQ ID NO:1153, b is an integer of 15 to 401, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1153, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1093 of SEQ ID NO:1154, b is an integer of 15 to 1107, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1154, and where b is greater than or equal to a + 14.</p>	<p>W72774, AI961188, AA985560, AI269056, AA076186, AA541279, N46999, NS1479, T67962, N53622, AL080011, AI952780, AI634350, AW055252, AI887163, AA969375, AA218835, N27874, AI540179, AW050850, AI818353, AI927233, AA528641, AA857847, R81679, AI440399, AI491775, AA594699, AA514684, AA721581, AA814782, AI635634, AA834534, AW163834, AI184903, AW149925, AI623941, AI524179, AI784214, AI539153, AA504514, AW132065, AI611743, AA878955, AI583578, AI824688, AI912434, AI683897, AA015749, AA196287, AL042191, AL049872, U62317, AC002471, AC005374, AC004383, AC006013, AC004878, AL022721, AL035458, AC004837, AC005291, AC004797, AC004934, AC006561, AL035587, AC005829, AC003041, AC002558, Z99495, AC005091, AC005156, AL035687, Z82206, AP000255, AC004941, AL034400, AL022165, AF031078, AF109907, AL110280, AP000213, AF030876, AC006017, AC004987, AP000135, AC005815, AC007458, AC006115, AC006222, AP000247, AL078463, AP000344, AC006344, AP000031, AC005488, AL031346, AL050322, AP000697, AL031281, AC005876, AL137270, U95739, AP000130, AP000208, AF207550, AC002464, AL096776, AC002472, AL022400, AC007172, AL133245,</p>
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1155	HUFDC50	875690		<p>AL031732, AL137716, AC004253, AL031984, AC002540, AC007193, AL020997, AF042090, AC006112, U52112, AP000152, AC002430, AF184110, AC002551, AF111168, AC006501, AF130343, AL096791, Z83840, AC005011, AC007384, AL050318</p> <p>AA489935</p>	<p>AL031732, AL137716, AC004253, AL031984, AC002540, AC007193, AL020997, AF042090, AC006112, U52112, AP000152, AC002430, AF184110, AC002551, AF111168, AC006501, AF130343, AL096791, Z83840, AC005011, AC007384, AL050318</p> <p>AA489935</p>
1156	HKLAB51	875697	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 605 of SEQ ID NO:1155, b is an integer of 15 to 619, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1155, and where b is greater than or equal to a + 14.</p>	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 517 of SEQ ID NO:1156, b is an integer of 15 to 531, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1156, and where b is greater than or equal to a + 14.</p>	<p>AA542845, AA782986, AW173084, AA971073, AW183046</p>
1157	HCGBB63	875698	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 812 of SEQ ID NO:1157, b is an integer of</p>	<p>AI568430, AI246554, AW027069, AA877169, AW149590, AI183422, AA716169, AI090869, AW005361, AA557127, AA993093, AW161538, AI214928, AI379010, AA506979, AI687187, AA433903, AA642688, AI335958, AI333689, W57684, AI040452, AI275620, AA890300, AI190701, AI290057, AI348102, AA926808, AI031596, N90906,</p>	<p>AI568430, AI246554, AW027069, AA877169, AW149590, AI183422, AA716169, AI090869, AW005361, AA557127, AA993093, AW161538, AI214928, AI379010, AA506979, AI687187, AA433903, AA642688, AI335958, AI333689, W57684, AI040452, AI275620, AA890300, AI190701, AI290057, AI348102, AA926808, AI031596, N90906,</p>

1158	HRGDD40	875699	<p>15 to 826, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1157, and where b is greater than or equal to a + 14.</p>	<p>AA872078, AI299396, W94366, N41036, AI282284, AI185236, AA453236, AI355169, W94475, AA948179, AW025303, AI146903, AI826491, AA827294, AI193123, AA451693, AI168575, AI268775, AI832661, AA885921, AI318374, W78211, AI797521, AW161473, AI878908, AA676574, W16482, AI140474, W19391, AA453076, AA807423, AW376438, W46807, F27907, H70310, AA746789, H22415, AA873324, AA427994, H18364, W16663, AA826881, H18333, C03502, F35271, F34797, AA375365, F32270, W46925, F35644, AA650485, AA758625, N89448, AA889188, AA494406, AA310092, H70822, AA906816, AA338496, AI335184, AA365661, AI906375, AA341769, AI459562, AA507722, C04086, AA327882, AA625863, F36483, AI906786, AA434582, H44893, W70314, H70823, AA583003, W31888, C01703, AI249827, F28846, H40883, AF044953, X59697 AA827755</p>
1159	H2LAD49	875700	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 600 of SEQ ID NO:1158, b is an integer of 15 to 614, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1158, and where b is greater than or equal to a + 14.</p>	<p>AI674404, AI091450, AA313891, N64362, AA593226, AW135198, D51423, D58283, D80253, D80188, D59859, D59610, D59502, D80227, D57483, D59275, D80022, C14331, D80166, D80366, D80195, D50979, D59619, D81030, D80210, D51799, D80391, D80164, D80240, D59889, D80043, D59787, D80269, D80212, D80196, D80378, D80038, D80219, D59467, D59927,</p>

15 to 594, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1159, and where b is greater than or equal to a + 14.	<p>C14389, D80193, D50995, C15076, D80024, D80241, AA305409, C14429, T03269, D80045, AW178893, D51060, C75259, C14014, AW178775, D51022, D80134, AW352158, D51250, AW179328, D81026, AW177440, AW378532, D80168, AA305578, D51079, D59695, D80251, D58253, F13647, D80522, D80248, C14227, AW178762, AA514188, AW177501, C14298, AW177511, D80133, D81111, Z21582, C14407, AA514186, AW360811, AW378540, AW377671, C05695, AW375405, AW179012, D80268, AW179024, AW178971, D80132, AW366296, AW179020, AW360817, AW375406, AW177456, AW378534, AW352171, AW179332, AW377672, AW179023, AW178905, AW179007, AW178754, AW177714, D59373, AW377676, AA285331, AW360834, D51097, D80302, D80014, AW179004, D80439, AW178906, AW352170, AW177731, AW178907, AW179019, AW179018, D80247, AI557751, AW378528, AW178908, D51103, AW352174, T11417, AW178983, AW178914, AW378543, AW378525, D59627, D80157, T03116, AI557774, D51759, AW178774, AW178781, AW352163, T48593, C06015, D50981, D80258, D51231, AW178755, D59653, T02974, H67854, AW178986, D45260, D51213, AW378533, AW367950, AA809122, D45273, T03048, C03092, AI525923, H67866, C14957, D59503, D59317, H67858, C14344, C14973, AI525917, D58246, AW179013, D80064, C16955, D51221, D59474, D59551, AI525920, AI525237, D60010, AA514184, D58101, AI535686, AI525235, Z30160, AI525227, AI535961, C14046, Z33452, AI525222, AI525242, A84916, A62300, A62298, AJ132110, AR018138, Y17188, X67155, D26022, A25909, A67220, D89785, A78862, D34614, I82448, D88547, AR008278, AF058696, X82626, AB028859, AR025207, Y12724, AB012117, A82595, X68127, AB002449, A94995, A85396, AR066482, AR060385, A44171, A85477, AR008443, I19525.</p>

1160	HMSGN49	875703	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 345 of SEQ ID NO:1160, b is an integer of 15 to 359, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1160, and where b is greater than or equal to a + 14.</p>	<p>A86792, U87250, X93549, I50126, I50132, I50128, I50133, AR066488, AR016514, AR060138, A45456, A26615, AR052274, AR054175, Y09669, A43192, A43190, AR038669, AR066487, A30438, I18367, D88507, I14842, D50010, Y17187, AF135125, AR008277, AR008281, X64588, A63261, AR008408, I79511, AR062872, A70867, AR016691, AR016690, U46128, D13509, AB033111, A64136, A68321, AR060133, AR064240</p> <p>AW294985, AI656659, AI950220, AI624744, AW003841, AW081373, AI652917, AA332683</p>
1161	HWLMC49	875704	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 619 of SEQ ID NO:1161, b is an integer of 15 to 633, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1161, and where b is greater than or equal to a + 14.</p>	AA827244, T79702, T82086
1162	HAVME52	875705	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a</p>	<p>AF109298, AW131127, AI092766, AA149579, N52554, N59831, AA151796, AA687571, AI474235, AA658141, AA296298, AA177004, W31561, AA523588, AI525303,</p>

			nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1408 of SEQ ID NO:1162, b is an integer of 15 to 1422, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1162, and where b is greater than or equal to a + 14.	N59830, AA662843, AA151807, W32120, W32085, W31628, AA523333, AC002064
1163	HCQDP49	875708	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 499 of SEQ ID NO:1163, b is an integer of 15 to 513, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1163, and where b is greater than or equal to a + 14.	H29023
1164	HCROW44	875717	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 563 of SEQ ID NO:1164, b is an integer of 15 to 577, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1164, and where b is greater than or equal to a + 14.	T68115, AF090125, AF074264, AC007537, AF074265
1165	HDPHF03	875719	Preferably excluded from the present invention are one or more polynucleotides comprising a	AW237145, AI964041, AI652991, AW388333, AW388283, AW388339, AW388453, AW378440, AW388413, AW388414, AI634155, AW388480,

			<p>nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 651 of SEQ ID NO:1165, b is an integer of 15 to 665, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1165, and where b is greater than or equal to a + 14.</p>	<p>AW388438, AI624430, AI677965, AI492186, AW388607, AW388633, AW388711, AI694383, AI963871, AI015391, N26502, AW388591, AW388449, AW388687, AW388511, N59336, AI352317, AW197113, AW366319, AI476054, AA526522, AW388455, AW388543, N67998, AW388336, AW388273, AW388642, AW388570, AW388358, AI206626, AW352126, H06135, R38073, AA639698, AA227926, AI001745, AW388561, AI267688, AW378421, AW378465, T32854, AW388265, AI619649, R44314, AW388270, AI423703, F10774, AW388586, R37116, T16595, C00538, R40211, H05894, AW388632, AW388615, AA227760, AW352118, AW023625, AW080157, AA693354, AW161156, AW020693, AI590043, AI623941, AI923446, AL079963, AI421662, AI567971, AI469754, AW089844, AA720970, AI696583, AI923989, AI818353, AW129264, AI559752, AL038986, AI500061, AI635082, AW163464, AI401697, AW059828, AW161098, AW020480, AI491842, AI538850, AL042944, AI619820, AI434731, AI114703, AI633125, AI698391, AI802695, AL120700, AI686808, AL040161, AI744204, N25033, AI673278, AI370623, AW168406, AL120526, AL040844, AA641818, AL036954, AA832154, AI610714, AW160916, AI818574, N29277, AW188525, AI538829, AI612747, AL043152, AW151974, AI890907, AI799228, AI817373, AL120588, AL045413, AI539690, AI627988, AI628325, AA907131, AW024921, AI567582, AI247082, AW023338, AI610690, AI884459, AL046942, AI866801, AL134999, AL121014, AI798456, R20540, AI446775, AL048323, AL120056, AL048340, AL047344, N33175, AA937574, AL119863, AI801793, AI440238, AI583578, AW051088, AI244343, AL045986, AI929108, AL135517, AL080011, AW160905, AI285514, AI887308, AI307604,</p>
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	AI374987, AI687568, AI580190, AL043196, AI866131, AI590943, AI699823, AA128805, T95813, AA814990, AI523973, AI815237, AA292158, AI863241, AI285439, AI097137, AI638644, AW169671, AI631076, AA928539, AI824688, AI824576, AI866465, AI872104, AI969655, AI686576, AW087445, AI952306, AI909641, AL036638, AI766348, AL040169, AW151132, AI628850, AI289483, AI457113, AI687944, AI522052, AW021662, AW188390, AI538764, AI682971, AI909697, AI536685, AI815232, AI866090, AI824375, AW162118, AI635950, T66952, AI874238, AW027898, AI687614, AA847198, AI580697, AI631082, AL039274, AW021717, AI421252, AI349012, AF090901, I48978, AL137533, AC007458, AF183393, Y16645, AI2558, AF090934, AF113694, AB016226, AF090900, U68387, AL133049, AF079763, AL050149, AF111851, AF002672, AF115392, M85164, AF114784, AJ005690, A65965, AF126247, AF126488, A65943, AL050172, AF106657, I48979, Y10655, X79812, AL117457, U62807, AF124728, AL050143, Y13350, AL137539, X66871, A77033, A77035, AL137554, AL096744, U72621, AL049452, S61953, AL122050, AB025103, AF090886, AL050116, AF125948, AL137488, AF113690, A65340, M85165, AJ000937, A03736, M79462, AL117635, AF113019, A65341, AL122104, AL133557, AL122093, AL133619, AL050393, AL133665, S36676, AL137459, AL110225, Y07905, X65873, AF008439, AL137550, AL133623, AF111849, AF090903, I00734, U92992, AF087943, Z37987, E00617, E00717, E00778, D83032, I89947, AF078844, AL122110, A08456, AF159615, I09499, AL133113, AF139986, AF182215, AL133560, Y11254, A08913, X89102, A91160, AJ010277, AL137254, A91162, AF192522, I28326, AR066485, X70685, Z82022, I80062, AF017152,



1166	HCRMO82	875722		<p>AL122100, S83440, AF177401, AL035458, AL137463, A08910, E08516, AF077051, AL049283, AR060156, U42766, A58524, A58523, U75932, A08907, A18777, A31057, AF118094, AL133080, I33392, AL137530, E07108, AJ006039, U73682, E02221, AL080124, AL133559, I89931, AR020905, AL133637, AL080227, E03671, A76335, AF031147, AL050146, AL137660, U78525, AL133031, AL137267, X81464, I49625, A08909, AF082526, AF119336, AL049382, AF004713, I61429, AF026124, AF061795, AF151685, AF004162, AL110222, AL137480, AF131773, AL049430, AL137529, AL023657, X99971, A08912, AR034821, AL122121, AF057300, AF057299, AF104032, X72889, A08911, AF113013, AL050170, AF100931, AL137557, AL117587, AF132676, AF118090, AF061836, AL137658, AL133014, AF146568, S77771, AL137479, AF126372, AL117648, AL137627, AR013797, AL133084, AF162782, AL137471, Y09972, U75304, AL137294, S76508, A18788, AR038854, S78214, AL110159, Y08864, AF113699, AL137560, AF106827, AF118092, AF142672, AB007812, AF185614, U37359, AL133568, AL080129, AF019298, I34395, I18358, AF000167, AF097996, A08908, AF201468, AL133640, AR012379, X72624, AL080110, AL117460, M96857, E12580, U51123, AR068753, AL096728, AL117435, AL122123</p> <p>AI819400, AI814979, AA044953, AI689770, AA018062, AI590996, AI760506, AI910522, AL119008, AA135834, AA989500, AW451393, AA988092, AI741134, AA721752, AW316860, AI823528, AI672307, AW451917, AA911199, AI656437, AL119009</p>
				<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1063 of SEQ ID NO:1166, b is an integer of 15 to 1077, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>

1167	HFCDP47	875724	<p>NO:1166, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1163 of SEQ ID NO:1167, b is an integer of 15 to 1177, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1167, and where b is greater than or equal to a + 14.</p>	<p>AI817320, AI147544, AI669712, AA610839, AI955720, AI056448, AI056793, AA402968, AI982764, AA909968, AA643704, AI499360, AW169601, AA832501, AI284966, AW272685, AA665839, AA922928, AA653898, AA470857, AA911776, AI359243, AI423624, AI587214, R14201, AA316613, AA883307, R37484, AA531527, N74317, AI089835, AA915883, AI381713, H04547, AA702343, H04468, AA059276, D30942, W05225, AA401934</p>
1168	HFICJ16	875725	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 684 of SEQ ID NO:1168, b is an integer of 15 to 698, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1168, and where b is greater than or equal to a + 14.</p>	<p>AI394070, AI559997, AC007262</p>
1169	HWLLU74	875727	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1394 of SEQ ID NO:1169, b is an integer of 15 to 1408, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	<p>AI131018, AA579604, AI719085, AI859045, AW131268, AI814819, AI888714, AA568348, AI342165, AI860466, AA534872, AI914155, AI125453, W72331, W74397, AI300474, AA593735, AI498120, AA879110, AA995383, AI914049, AW449767, R60206, AA587361, AA588397, AI016404, H08009, H11647, AI269377, H12175, H19419, AI358021, T35018, AA470365, R14664, AA588354, H27693, H19418, H27694, H73776, AI337500, AI125449, AW078532, AA369905, Z41279, R45641,</p>

1170	HLMDSL3	875728	NO:1169, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 810 of SEQ ID NO:1170, b is an integer of 15 to 824, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1170, and where b is greater than or equal to a + 14.	AA404338, AA935725, AI678765 AA700315, AA485611
1171	HODBC46	875729	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 581 of SEQ ID NO:1171, b is an integer of 15 to 595, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1171, and where b is greater than or equal to a + 14.	
1172	HCYBO46	875731	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 472 of SEQ ID NO:1172, b is an integer of 15 to 486, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID	AA305824, AA315640, AW390685, D59502, AA193420, D80043, D59275, D81030, D57483, D59859, D80391, D80024, D58283, D80253, D80196, D59787, D80166, D51423, D80195, D59619, D80210, D51799, D80240, D59927, D80227, D80022, D80212, D80188, D80219, D50995, D80269, D80038, C14389, D59889, C14331, D80366, D80193, D80164, D59610, D50979, C15076, D59467, D80378, C14429, AA305409, D80241, D80045, T03269, C14014, D51060, C75259, D51022, AW178893, D80134, D81026, F13647, AW179328,

<p>NO:1172, and where b is greater than or equal to a + 14.</p>	<p>D80268, D51250, AW178775, AW177440, AW378532, AA305578, D58253, C14227, D80949, AW369651, D80522, D80168, D52291, D51079, AW352158, D80251, D81111, Z21582, D80248, AW178762, AA514188, AI910186, AA514186, C14298, AI905856, AW177501, AW177511, D80064, D80133, AW360811, C14407, C05695, AW352117, AW176467, AW375405, AW378540, AW377671, AI557751, D80132, AA285331, AW177731, D51097, AW366296, AW360844, AW360817, AW375406, AW378534, AW179332, AW377672, AW179023, AW178905, AW360834, D80302, AW352171, D80439, AW377676, AW178906, AW352170, AW178907, AW179019, AW179024, D59373, D80247, D51103, AW179220, AW177505, AW179020, AW360841, AW178909, AW177456, AW352174, AW179329, AW177733, AW178980, AW179018, D59503, AW378528, AW178908, AW178754, T11417, AW179004, AW177722, AW179012, D80014, AW178914, AW378525, AW367967, D80157, AW177728, T03116, AW179009, D51759, AW178774, AW178911, AW378543, AW352163, D58246, AW178983, AW352120, AW178781, T48593, D58101, C06015, D80258, D59627, T02974, AW177723, D59653, AW177508, AW378539, C14975, D51213, D45260, AI535850, AI557774, AW378533, AW367950, H67854, AI525923, AW177497, C03092, H67866, AA809122, C14973, AW178986, AW177734, AI525235, AI525917, D45273, D59317, C14344, D51221, D59551, D50981, D59474, AI535686, AI525920, D60010, AA514184, C14957, D60214, AI525227, C14046, T03048, AI535961, AI525242, AI525912, AW378542, AI525925, AI525215, C16955, C05763, Z33452, AI525222, AF060219, A84916, A62300, A62298, AJ132110, AR018138, X67155, Y17188, D26022, A25909, A67220, D89785, A78862, D34614, D88547, AF058696, X82626, AR008278, AB028859, I82448, AR025207, Y12724, AB012117, X68127,</p>
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1173	HCUEB32	875733	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1095 of SEQ ID NO:1173, b is an integer of 15 to 1109, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1173, and where b is greater than or equal to a + 14.</p>	<p>A82595, A85396, AR066482, A44171, A94995, A85477, I19525, A86792, U87250, AR060385, AB002449, X93549, AR008443, I50126, I50132, I50128, I50133, AR066488, AR016514, AR060138, A45456, A26615, AR052274, AF135125, AR066490, Y09669, A43192, A43190, AR038669, AR066487, I18367, A30438, AR054175, D88507, I14842, X64588, D50010, Y17187, A63261, AR008277, AR008281, AR008408, AR062872, A70867, AR016691, AR016690, U46128, AB033111, I79511, D13509, A64136, A68321, AR064240, AR060133, U87247, AB023656, U79457, Z82022, AF123263, AR032065, AR060382, X93535, AR008382</p> <p>AW168181, AW206649, AI922409, AW080620, AW130528, AI761499, AA653277, AI927432, AW081680, AI167194, AW081694, AL040959, AW206389, AI652360, AA493404, AI652675, AI337391, AI203409, AI339098</p>
1174	HCRNQ45	875734	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 403 of SEQ ID NO:1174, b is an integer of 15 to 417, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1174, and where b is greater</p>	<p>W39008, AW444757, AW452817</p>

1175	HWLOO86	875736	<p>than or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 958 of SEQ ID NO:1175, <math>b</math> is an integer of 15 to 972, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:1175, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	<p>AW007552, AA631188, AI591162, AI597940, AI913964, AI125099, AA514439, AI732368, AA130570, AA524037, AI732382, AI913985, T24883, T24441, Z82216, AL049543, AE000660, AC005145, AL034369, AL031176, AL022158, Z69906, AL049750, AC007486, AL035552, AC008109, AL022164, Z97181, AC004865, AC002412, AC004075</p>
1176	HSPME53	875737	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 429 of SEQ ID NO:1176, <math>b</math> is an integer of 15 to 443, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:1176, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	
1177	H2CBE48	875738	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 577 of SEQ ID NO:1177, <math>b</math> is an integer of 15 to 591, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:1177, and where <math>b</math> is greater</p>	<p>AI807250, AI089251, AI378396, AI650375, AI087818, AA770446, AI493563, AA805923, H75516, AI493544, AI261989, AA307336, C14331, C14344, C14407, D50995, D59927, AA514188, C14389, D80168, C03092, F13647, D58101, D80022, T02868, D80247, C15076, D45273, D80269, D51799, D59503, D80227, D59502, Z33452, D80228, D80188, D59467, AA305720, D59610, D80378, D80241, T03048, AI535961, AI525922, AI525920, AI525238, AI525237, AI525907, AI525903, AI525969, AJ005273, X58472, A62298, AF058696</p>

1178	HCQDJ47	875739	<p>than or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 446 of SEQ ID NO:1178, b is an integer of 15 to 460, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1178, and where b is greater than or equal to <math>a + 14</math>.</p>	AW020917, AB007956
1179	HDTKC01	875740	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 553 of SEQ ID NO:1179, b is an integer of 15 to 567, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1179, and where b is greater than or equal to <math>a + 14</math>.</p>	AA521474, AI089721, AW297296, AW181990, AI097236, AI299185, AA931786, AA836613, AA976871, AI279776, R82197, H38948, AI886396, AW078989, W59999, AW235744, H86820, AW265599, AA936252, AA069472, AA987461, AA886940, N42321, AI524654, AI624859, AI572717, AW243741, AI432644, AW104141, AI345688, AI613314, AI682106, AL047344, AI627714, AI686589, AI801152, AI242248, AW023846, AI874166, AI336634, AA641818, AI701097, AI950664, AI345415, AW366372, AI491852, AI620056, AI804515, AW020693, AI582912, AI284034, AL041562, AW263804, AI887569, AW022494, AI619587, AW020288, AA056265, AL036780, AI613038, AI624529, AI669459, AI281412, AW163464, AI586931, AI473536, AI434223, AW083825, AI478902, AI884318, AI567211, AA857847, AI922037, AI799674, H41759, AI355613, AI687809, AW083572, AI923871, AW410430, AI537261, AI478282, AI627896, AI352290, AI679959, AI915291, AW152182, AI702527, AI472566, AI540674, AI436429, AL045163, AW020592, AI349957, AI348969, AI584130,

AI758924, AI345005, AW438793, AI471909, AI565172, AI249877, AW194014, AI804505, AW263823, AW073677, AI868204, AI633125, AI819545, AI345014, AI538564, AI799189, AI452560, AI655932, AI538716, AI699020, AI682640, AI690813, AW075382, AI309306, AW105431, AW411225, AI698391, AI633061, AI281772, AI520881, AI620643, AI355779, AW024594, AW118518, AI568886, AI638644, AI334893, AI688848, AI273856, AI491710, AI628214, AI434731, AI289791, AI473208, AI889189, AI690748, AI569975, AW081047, AI918554, AI306705, AI340627, AI554186, AI620003, AW073898, AI624157, AW148356, AI499570, AI499986, AI591310, AL045413, AL039274, AW022636, AI963068, AI955906, AI702301, AI471429, AL036923, AI866465, AL135024, AI538829, AI624084, R41605, AI889147, AI446124, AI623941, AA815283, AI500061, AI537677, AI439903, AW103628, AI254226, AI521560, AI521005, AI859644, AI699823, AI890907, AW020397, AI683173, AI670009, AI566003, F28295, AW170635, AI244647, AW088605, AW082532, AA019328, AI631264, AW089572, AW055252, AW090103, AW023871, AW192701, AA665612, AW117675, AI433600, AI440263, AI890838, AW079432, AI866573, AA042949, AI541048, AI784214, AL134712, AW152550, AW263569, AA572872, AI500523, AI538850, AW029317, AI859991, AI536836, AA827691, AI581033, AI925744, AI305157, AI473471, AI345612, AI241744, AI583578, AI349958, W45537, AI288285, AI254814, AA761557, AI345416, AA939199, AI310575, AI868180, AW024360, AW193467, AL039086, AI680504, AI648699, AI886181, AI285439, AA693331, AI433611,				
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	AI254420, AW025279, AI678850, AI590043, AW129264, AB023145, AB028449, AL122045, U49908, AL080074, AL122100, X57084, AL122104, AF004162, AL137711, AR038854, E02152, AF002672, I89947, L13297, AI8777, AF118094, I48978, I33391, U42766, AL137558, U88966, E12806, AJ006039, A08913, U80742, AL137488, AL049324, E03671, AL117626, AL050149, A08912, AF141315, AF090901, X65873, AL133049, S77771, AF119337, U92992, I89931, U35846, AL117460, AL049466, AF032666, S76508, A08910, A08911, I89934, I49625, A08909, E02253, AF142672, M96857, X06146, AF185576, A08907, A08908, I52013, I32738, AL080126, A58524, A58523, Y18678, U58996, AF146568, AF119358, AL137539, Z97214, AR020905, AF036941, U72621, AF038440, A18788, AL050015, A86558, AL050208, A77033, A77035, AL133640, AF139986, AL137555, AF019298, AF000145, AL110280, X57961, AF115410, AL137283, AF090943, AF115392, AL137459, I17767, S82852, AL133113, AL049452, AR068466, A15345, AF026816, S75997, S78453, AL137478, X83544, AL137530, X80340, AL137271, AL049314, AL137258, M85165, U86379, AF026008, E12580, AF044323, AF061981, AL133619, AL137465, AF055917, AL035587, A17115, A18079, AL080124, AF067790, AL133637, AJ000937, AL133557, AL110158, E12579, U57352, AL122118, AL117435, E02221, A90832, AF008439, AL137479, I00734, AF113694, S63521, AR068753, AL133558, A65341, X70685, AF069506, X72624, AL050280, AF031147, AF183393, AF159148, Y09972, X54971, I09499, E00617, E00717, E00778, AF016271, AF030513, X66975, AF102578, AF106862, AF057300, AF057299, I89944, E12747, A21103, X63410, Y10823, AF106657, AL050172, AL117416, AF151109, AL080140, AF194030, E06743, AB016226, AF113019,

1180	HCQDI44	875746	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 335 of SEQ ID NO:1180, b is an integer of 15 to 349, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1180, and where b is greater than or equal to a + 14.</p>	<p>A57389, AF113677, X66862, AL049339, Y16645, AL117587, AF087943, AL050277, AF107847, AL133081, AF141289, AF079763, AJ242859, AF047716, AL110221, AF090903, Y14314, AL050116, U51123, AF125948, L31396, AF158248, AL110224, A12297, AL110222, AL137548, L31397, AJ005690, AF061943, AL137476, D83032, AL133665, AL137537, X81464, S83456, AL133067, D83989, AF017437, AF126247, X66871, AL049938, E04233, Y11254, AF038847, U02475, AL080159, AF200464, E15324, AF150103, AL137533, AF199027, U49434, X67813, AF137367, AJ012755, AL050366, AF113013, I29004, X66417, E01573, E02319, AF106945, AL137463, AL110171, X98066, Y10655, AF091084, AF090934, AF100931, S36676, AL049464, AL049382, X92070, AL137281, I26207</p>
1181	HNFGP44	875747	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 365 of SEQ ID NO:1181, b is an integer of 15 to 379, where both a and b</p>	<p>R17097</p> <p>AI133562, AA855881, AI783849, AA829608, AW058434, AL109610, AC005071, Z54246, Z69837, AC005516, AC007055, AC006057, AL078583, AF097732, AC005220, AC006964, AC004030, AC008545, AL049780, U91327, AC006023, AL020997, AL133371</p>

1182	HWLQG44	875751	correspond to the positions of nucleotide residues shown in SEQ ID NO:1181, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 389 of SEQ ID NO:1182, b is an integer of 15 to 403, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1182, and where b is greater than or equal to a + 14.	AW130607, AA976866, R66412, AI289641, AI459945, AC004851
1183	HHMMD4 <sub>4</sub>	875752	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 403 of SEQ ID NO:1183, b is an integer of 15 to 417, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1183, and where b is greater than or equal to a + 14.	AA262855
1184	HCQAC43	875753	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 629 of SEQ ID NO:1184, b is an integer of 15 to 643, where both a and b	AI880389, N20300, N63913, AW083576, N27569, N98285

1185	HWLUF33	875754	<p>correspond to the positions of nucleotide residues shown in SEQ ID NO:1184, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 537 of SEQ ID NO:1185, b is an integer of 15 to 551, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1185, and where b is greater than or equal to a + 14.</p>	AA280724, AW369170, R26169, H02035
1186	HCRPE66	875760	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 553 of SEQ ID NO:1186, b is an integer of 15 to 567, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1186, and where b is greater than or equal to a + 14.</p>	AA922154, AI921318, AA909502, W73883, AC005021, L48427
1187	HCYBD73	875761	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 552 of SEQ ID NO:1187, b is an integer of 15 to 566, where both a and b</p>	AA700080, AA305107, AI241587, AW295338, AI198105, T07192

1188	HWTCTF43	875765	<p>correspond to the positions of nucleotide residues shown in SEQ ID NO:1187, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 290 of SEQ ID NO:1188, b is an integer of 15 to 304, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1188, and where b is greater than or equal to a + 14.</p>	<p>W03161, AA372394, AA626628, AL134565, AA321501, AA598424, N46519, AI832184, AF003625, AC004065, AL022401, AC000980, AL022577, AC004066, AC004043, AL023878, AC007313, AC003091, AL031289, AF055066, Z80903, AL049778, AC005017, AC007533, Z73913, AC006257, AL132668, AL021329, AC001017, Z83820, AL031388, AC003976, AC002463, AC012085, AC004051, AL009047, AL022400, AL031673, Z94055, AC016831, AL133239, AL096803, Z83850, AC006197, AF126403, AC006466, AF002223, AC000114, AF036876, AC009891, AL031114, AC006195, AL121595, AL109847, AC006397, AL031116, AL080316, AL008629, AL034412, AL050401, U80459, U96409, AP000127, AP000205, AL009028, Z93929, AF003528, AL022727, AC004057, AF188025, AC006545, AC004010, AC006546, AL009174, AC006313, AP000245, AL031466, AF020801, AC002990, AC005539, AC005352, AP000141, AC008082, AL034351, AC002394, AC005703, AC006207, Z95126, AL133241, AC005939, Z95114, AP000088, AC005859, AL109662, AL022154, AL035695, AC000110, AC007004, AL030996, AL031074, AC002071, AC005337, D87675, AC004959, AL031584, AC004544, AC018633, AC004470, AL049859, AC007243, AL034410, AC004069, AL079306, AL121652, Z68746, Z99572, AL132777, AL035258, AL132774, AC006365, AC004908</p>
1189	HCRNA26	875766	<p>correspond to the positions of nucleotide residues shown in SEQ ID NO:1187, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a</p>	<p>AI492910, H27915, R87432, AC004492</p>

			is any integer between 1 to 526 of SEQ ID NO:1189, b is an integer of 15 to 540, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1189, and where b is greater than or equal to a + 14.	
1190	HCQDD42	875768	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 475 of SEQ ID NO:1190, b is an integer of 15 to 489, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1190, and where b is greater than or equal to a + 14.	R30734, R58196, AI808768, AI809938
1191	HCRNN21	875769	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 398 of SEQ ID NO:1191, b is an integer of 15 to 412, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1191, and where b is greater than or equal to a + 14.	H39029, AL133893, AB023167
1192	HCRNH26	875772	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a	AI261627, AW274550, AI418272, AA458605, AW293861, AA731376, AI927518, D80453, AI217860

1193	HDPWD42	875773	<p>is any integer between 1 to 814 of SEQ ID NO:1192, b is an integer of 15 to 828, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1192, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 266 of SEQ ID NO:1193, b is an integer of 15 to 280, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1193, and where b is greater than or equal to a + 14.</p>	N91462, AI873775	
1194	HTAET42	875774	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 379 of SEQ ID NO:1194, b is an integer of 15 to 393, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1194, and where b is greater than or equal to a + 14.</p>	AC006946	
1195	HMCIK65	875778	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a</p>	<p>AA488988, AI658816, AI808265, AI634138, AI695249, AA954672, AW236923, AA495812, AI308233, AA910211, AA488768, W21487, AI014480, AA484868, AW382542, N91779</p>	

			is any integer between 1 to 923 of SEQ ID NO:1195, b is an integer of 15 to 937, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1195, and where b is greater than or equal to a + 14.	
1196	HDTGQ43	875779	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 476 of SEQ ID NO:1196, b is an integer of 15 to 490, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1196, and where b is greater than or equal to a + 14.	AA609595, AI034361, AA983577, AA948387, AI660929, AI277113, AA906837, W60817, W60814, R54995, AI828307, R55002, AI927134, AW448912, AW022996, AW020086, AL036634, AL036759, AL036858, AL036924, AL038447, AL037082, AL037639, AL119319, AL036719, AL110306, AI929108, AW071417, AI927233, AI621341, AI307557, AW162194, AL037615, AW084056, AI335214, AL035928, AL037021, AL037643, AL036167, AL038529, AW161202, AI537677, AW087445, AW079432, AW161098, AI349186, AI961589, AI474646, AI887775, AI583578, AL037049, AW151136, AI815232, AW303089, AW163834, AI623941, AW051088, AI270183, AL048298, AI567971, AI471429, AW023351, AI631977, AA580663, AI888665, AI445620, AI500061, AI866770, AL046944, AI285439, AI476076, AI475371, AL040636, AI440238, AI538885, AI889376, AI679550, AW020397, AI445611, AW163554, AI494201, AI679266, AI284509, AA572758, AI499963, AI340519, AI340603, AL045500, AI433157, AI345745, AI702073, AL036808, AI828412, N33175, AA420722, AI521560, AI523806, AW022102, AL040241, AI633125, AL036638, AI698391, AI446373, AI915291, AA514684, AI582932, AW411043, AI889189, AI380329, AI824576, AI241901, AI432570, AL138388, AI345688, AI923989, AI458588, W74529, AI274768, AI254727, AI818728,



AI625209, AI866090, AL042551, AI802542,  
AL119863, AL040011, AW023338, AI345608,  
AA938092, AI933992, AI554485, AI554821,  
AL048323, AA259207, AA806719, AI290153,  
AI801556, AI539771, AI890576, AL048340,  
AW152182, AI623736, AW366372, H42557, AW022636,  
R32821, AI500659, AI345471, AI366549, AW269097,  
AI801325, AI500523, AI582966, AI538867,  
AI284517, AI499986, AI500706, AI307543,  
AI491776, AI445237, AW151138, AI434731,  
AI909661, AW172745, AI500662, AI680221,  
AI889168, AI345253, AI284060, AL039011,  
AI344935, AI866573, AI633493, AI433590,  
AI434256, AI245008, AI589428, AI805769,  
AI251221, AI888661, AI284513, AA464027,  
AI702065, AI888118, R75918, AI690948, AI889147,  
AW020095, AI536601, AI440252, AL047422,  
AI349957, AI758988, AL043321, AI536912, N29277,  
AL119836, AW410259, AI886415, AI345677,  
AI561356, AI352497, H89138, AL037454, AL042365,  
AL038605, AL119791, AI670009, AI689614,  
AW075382, AI801793, AA693314, AW089006,  
AA836168, AL038778, AA579232, AA635382,  
AW403717, AI866127, AL046466, AA088789,  
AI334930, AI918435, AL039086, AI802240,  
AL047344, AW169784, AW089275, AI349937,  
AI638644, AI560545, AW189301, AI288305,  
AI699823, AI620284, AI334445, AI866469,  
AW008353, AL120300, AI678428, AW168875,  
AI859991, AI582367, AI912434, AW170773,  
AI249877, AI690813, AI582926, E03348, Z82022,  
I89947, AL049283, I48978, I66342, AL110159,  
U67958, Y10655, A08916, AF182215, S68736,  
AR034821, A08913, AL049347, AL137271, AL080127,  
AL080140, AF026816, AL137539, A08910, A08909,  
AL117457, AR011880, Y11587, E03671, AL080159,

Z97214, AL137627, Y14314, I32738, S77771,  
AF113689, I89931, X79812, AF087943, AR029490,  
U75932, AL080060, I49625, S83440, AL117435,  
AF079765, AL122110, AF069506, AL133075, M92439,  
AF183393, AL050116, AF158248, AL137550,  
AF100781, AF113019, AL110296, AL137538,  
AF026124, Z37987, AR029580, S61953, AL049466,  
AF125948, AL137292, I48979, AF078844, AL050277,  
AL133093, AL137554, A07647, AL050146, U80742,  
U49908, A77033, A77035, I33392, AF061795,  
AL050149, AF151685, AF177401, AL050138,  
AL110280, X72889, AF028823, AF118094, AL133640,  
AL137459, AF079763, AL110221, AL133016, A45787,  
AL050393, E07361, AF094480, AF090900, AL137533,  
AL122121, AF057300, AF057299, AL133560,  
AL133081, AF118092, U86379, AL137711, U87620,  
AL137656, A08912, Y10080, X82434, AF100931,  
A18777, A07588, AF113699, AJ238278, AF090903,  
AL096744, AF180525, AL133606, A03736, AL137521,  
X63574, AJ005690, AJ012755, AR038854, AL133637,  
AF113677, AF090943, AR000496, U39656, A08908,  
X84990, AF017790, M96857, AL137529, I30339,  
I30334, AL137256, AR068753, AF061573, AL137479,  
S76508, AL080124, AL137463, AF111112, X63410,  
AL117648, AL122049, Y16645, A65341, AL137478,  
AL110196, AL122050, AF141289, AR059958,  
AL117460, AL133077, AL122093, AL133619,  
AL133565, X98834, AF113691, AF113690, AF017437,  
AF097996, AL133080, AF146568, X93495, AL133049,  
AL137476, A93016, I00734, AL137283, S36676,  
A65340, X80340, M30514, AF047716, AL049452,  
AF113676, E00617, E00717, E00778, U68387,  
AL050108, AL080126, U35846, AF008439, I89934,  
AF113694, X66862, A86558, AF067728, AL080154,  
Z13966, AL137648, M86826, AL133568, AL117392,  
AF081197, AF081195, AL122123, U88966, AF091084,

1197	HT2SF78	875780	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1497 of SEQ ID NO:1197, b is an integer of 15 to 1511, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1197, and where b is greater than or equal to a + 14.</p>	<p>AF207750, A57389, AL117463, AL049938, Y11254, AL137523, AR038969, U90884, E02349, AF106827, AF111849, E15324, E07108, AF015958, U78525, AL133113, AL133072, AL137480, AF102578, AF106862, S78214, A58524, A58523, AF003737, AL137556, AF175903, AL050024, AL049430, I26207, AL117583, X52128, AL117585, AL133557, A93350, E01314, I03321, AF090901, A12297, U91329, D55641, AF090934, AF118064, I09360, AF118070, AL137560, AL122098, AF017152, U00686, AJ003118</p> <p>AI291051, AA169183, W37412, AA081743, AA634346, W37413, N95342, AA757329, N49251, AI051537, W25251, AI028044, AI765214, H96923, AA844562, AW367898, N84978, N46525, AA169311, Z19468, AC007671, X77922, L43494, D26360, L32867, D45255, U53883, L38677, X84235, AC007544, AF088002</p>
1198	HCRMG60	875781	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 729 of SEQ ID NO:1198, b is an integer of 15 to 743, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1198, and where b is greater than or equal to a + 14.</p>	<p>AA443447, AW386761</p>
1199	HCRNC13	875782	<p>Preferably excluded from the present invention are one or more</p>	<p>AA514691, AI863374, AA634463, AW015540, Z41103, AL046561</p>

1200	HCRPH74	875783	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 495 of SEQ ID NO:1199, b is an integer of 15 to 509, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1199, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 252 of SEQ ID NO:1200, b is an integer of 15 to 266, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1200, and where b is greater than or equal to a + 14.</p>	AW058223, AI891075	
1201	HCQDW41	875784	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 380 of SEQ ID NO:1201, b is an integer of 15 to 394, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1201, and where b is greater than or equal to a + 14.</p>	AA236027, U91326, AF001549, U95742, AC007216, AC002045, AC002039, AC002425, AC002544	
1202	HCRMZ22	875785	<p>Preferably excluded from the present invention are one or more</p>	AA226868, AA668240	

1203	HCQDE41	875786	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 420 of SEQ ID NO:1202, b is an integer of 15 to 434, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1202, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 411 of SEQ ID NO:1203, b is an integer of 15 to 425, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1203, and where b is greater than or equal to a + 14.</p>	AA454059, N81040	
1204	HMKCZ06	875787	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 675 of SEQ ID NO:1204, b is an integer of 15 to 689, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1204, and where b is greater than or equal to a + 14.</p>	<p>AI732208, AW007403, AA570148, AI990949, AA974880, AA502007, AA587096, AI748880, AA918155, D25690, AW338222, AA916641, AI732207, AI679197, AA532851, AA877116, R55320, AL031587, AL022322</p>	
1205	HMEGG05	875789	<p>Preferably excluded from the present invention are one or more</p>	<p>AA126720, AA304970, AI245437, C05706, AW074185, AI963381, AI278686, AI673497, AI3555944,</p>	

1206	HNTMD41	875792	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2462 of SEQ ID NO:1205, b is an integer of 15 to 2476, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1205, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 616 of SEQ ID NO:1206, b is an integer of 15 to 630, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1206, and where b is greater than or equal to a + 14.</p>	<p>AI254709, AI556972, AA861926, AI696647, R15875, N77782, AI583602, AA424183, AA424252, AA860484, AI590425, AA962253, AI539094, AA872756, C04708, H89906, AI245750, AI015771, AW087562, AW179256, AI857288, C20598, AA688200, AI866350, AI887115, AA370173, AA720604, AA599102, AA594409, AI351720, AI818385, AI859521, AA360027, AI500090, AC006153, AJ250713, T66501</p> <p>AI689837, AW157773, AW134686, AI986479, AI879625, AW418716, AA975403, N90063, AA400229, AA554561, AI202416, AI208155, AI269000, AA480947, H05090, AA400228, AW137275, AI701698, AW392920</p>
1207	HCRNJ24	875794	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 741 of SEQ ID NO:1207, b is an integer of 15 to 755, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1207, and where b is greater than or equal to a + 14.</p>	<p>AA827926, AI860653, AW161711, AI808773, AI636695, AA741501, AA740727, AI889967, AW070423, AI075387, AI754281, AI300905, AI150922, N62430, AA142986, AW243049, T88858, AW298247, N67204, AI866174, AA150916, AI830959, AW361300, AA630806, AC006011</p>
1208	HWABK33	875798	<p>Preferably excluded from the present invention are one or more</p>	<p>AA977204, AA449116, AI377322, AI632071, AI743462, AI700245, AA613327, AI135261, N68390,</p>

			<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 586 of SEQ ID NO:1208, b is an integer of 15 to 600, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1208, and where b is greater than or equal to a + 14.</p>	AA236532, Z39901, AI370677, H17781, T34975, AA936440, AW087776, AI886612, AI653609, AA593199, AA804236, AI285242, AA805442, AI686576, AW263796, AI553645, AW089275, AI927755, AI621341, AI623941, AI698391, AW104724, AI699865, AA848053, AW148536, AI624548, AI472536, AI567582, AI673363, AI537837, AW051088, AI815232, AI538564, AI915291, AW152182, AA908294, AI582932, AI889189, AI866469, AI624056, AI417790, AI884318, AA514684, AW167146, W74529, AI624304, AI609069, AI932794, AL046595, AI491842, AL121328, AI491805, AI590423, AI909661, AI690887, AI969655, AI370623, AW149925, AI865906, AI498067, AI784233, AI888746, AW078606, AW162194, AI624545, AI635492, AI874261, AI863665, AW189301, N33175, AW262491, AI886753, AW169234, AI798456, AI690410, AI917428, AW103878, AW029186, AI631216, AL042382, AI251221, AW265004, AL046944, AI499570, AI742728, AW118518, AW162690, AI866780, AI538885, AI927233, AI818353, AI963846, AW089405, AL043975, AI568138, AI590603, AI564426, AI870190, AI802542, AI440399, AA629959, AI273085, AI686817, AI522052, AW160916, AI635032, AI609409, AI583578, AI473528, AW073865, AI590043, AI207656, AI500061, AI799313, AL036673, AI469270, AI500714, AI225023, AI537244, AW090768, AI565128, AW129722, AI473536, AI499890, AI002285, AI819545, AI469532, AI583065, AI564719, AI288305, AW163834, AI345415, AW088328, AL079963, AW044386, AI702073, AI912356, AI636588, AI241763, AI812107, AI538764, AI913330, AW169671, AI570989, AI269580, AI538716, AW090736,
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AI624938, AI581033, AI978703, AL043355,  
AI805603, AW105087, AI345688, AI613038,  
AI612852, AI934052, AA641818, Z98446, AI247193,  
AW198090, AW085373, AW148408, AI613270,  
AL036923, AI570056, AI537303, AW264029,  
AI439762, AI433157, AI610690, AI640873,  
AI890907, AI536685, AI891084, AW078729,  
AI633125, AI670984, AI950729, AW168663,  
AI638644, AI923989, AL043345, AI249800,  
AA911767, AI686808, AI701097, AI432969,  
AI863321, AI623379, AI559619, AI699823,  
AW193530, AW073270, AI554485, AW079432,  
AW151136, AI682971, AW105412, AI655932,  
AL045500, AI500588, AI677796, AI250852,  
AI554821, AI538850, AI286256, AI619426,  
AI873644, AI359586, AI863382, AL119791,  
AI817523, AI570807, AI439452, AA602414,  
AI473451, AL138457, AI114703, AA738104,  
AW088698, AW078529, AI609375, AI633061, Z72491,  
AL117435, X70685, X72624, AL023657, AF118090,  
AF090903, I48978, AL137533, A77033, A77035,  
D83032, AF017437, I89947, AL137292, AL137558,  
AF113690, S36676, X84990, AF032666, AF146568,  
AL096744, AF090900, U75304, I08319, E05822,  
Z37987, A03736, S78214, AL050024, AL133640,  
AF106657, AR038854, AF069506, AF111849, A08913,  
AF081197, AL117460, AJ012755, X65873, AF182215,  
AF113019, AF118094, AL117626, AL117416,  
AL050092, AF067728, AF180525, AL050155, I09499,  
AL117648, AL049283, AL050172, AL080148,  
AL122121, X98834, AL137530, A08912, AF139986,  
AJ005690, A08910, I79595, AF002985, A08909,  
U83980, AL133665, I48979, AL133560, X82434,  
AF090934, Y16645, A08908, AL122050, AF183393,  
I66342, U78525, Y07905, AL080163, AL137479,  
AL110280, AL137550, U88966, AF100931, X80340,



				<p>AF031147, AL133016, X59414, E12747, E01573, E02319, AF067790, A12297, AF097996, AL049423, AF125948, AF061573, A08916, X83508, AF081195, A18777, AL122110, I89931, X72889, AL137459, U42766, AF139373, A93350, U68387, AF026816, I49625, A65341, AJ000937, AR034821, AF017152, AL110222, AF106862, X53587, AF076464, Y11587, AL133080, M85164, U96683, AL137529, AF090886, AL110221, E07108, AL117457, AL122118, AF090901, AL137294, E06743, I68732, A15345, X81464, X87582, A83556, AF087943, AL137271, AL096751, AL133031, AF079765, Z97214, AL133558, AL122100, AL050149, M92439, D16301, AF113677, I28326, AL137478, AC006336, AL137488, AL133113, AL110218, S76508, I89934, AF028823, I33392, Y10080, Z82022, AF153205, AF185614, AL133075, AL050116, AF177401, AL133568, AL050138, AL050393, AL137480, A21101, Y10655, AL110196, AL080159, E02349, AL117649, AF061795, AF151685, AJ003118, AF039138, AF039137, U49434, X06146, AR011880, AR013797, AR012379, AJ238278, M96857, I30339, I30334, AL137256, U31501, S68736, AL080129, AL137476, AL137539, S71381, AF078844, AR020905, AF200416, AF111851, A07647, AF185576, S77771, AJ006417, AF091084, Y11254, X83544, AL133081, AF079763, X52128, AF060866, AF142672, AL133557, AB007812, AF061981, AL122093, AL133606, I89944, AL133067, AF113689, AL049430, AL049382, AL080154, I42402, AL122111, AF210052, AL117583, Y14314, AL122045, AF158248, AL117394, AL137705, AL110224, AC004093, AL080118, X61970, A08907, AF113694, AF113699, M86826</p>
1209	HCYBC44	875800	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by</p>	<p>AA305027, AI167228, AI913614, AC021092</p>

1210	HWLQA40	875801	<p>the general formula of a-b, where a is any integer between 1 to 769 of SEQ ID NO:1209, b is an integer of 15 to 783, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1209, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 561 of SEQ ID NO:1210, b is an integer of 15 to 575, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1210, and where b is greater than or equal to a + 14.</p>	<p>AI563898, AW072034, AI985652, AW025367, AA568178, AW262766, R60170, AA946920, AI985700, AI341944, AI245652, AW149165, AI453178, R40393, Z39653, F09372, AA594484, T23979, F04421, F10466, F02571, R38571, R40082, F01627, AI978944, AI269816, AI588858, C00343, AI683935, AB033084, AF019638</p>
1211	HWHPI43	875804	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 561 of SEQ ID NO:1211, b is an integer of 15 to 575, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1211, and where b is greater than or equal to a + 14.</p>	
1212	HKCSF43	875805	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by</p>	<p>AW139161, AI828623, AI675466, AI420850</p>

1213	HCQAD39	875808	<p>the general formula of a-b, where a is any integer between 1 to 509 of SEQ ID NO:1212, b is an integer of 15 to 523, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1212, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 738 of SEQ ID NO:1213, b is an integer of 15 to 752, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1213, and where b is greater than or equal to a + 14.</p>	<p>AI309859, AI809088, AI650556, AI377258, AA629018, AW206377, AI968047, AI400261, AI014432, AI014514, AI143472, R02586, AI538164, AW387895, AW237769, AI474528, AA884915, AW387862, AA007677, AI522203, AW382761, X85547, AL080091</p>	
1214	HCRNL08	875809	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1074 of SEQ ID NO:1214, b is an integer of 15 to 1088, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1214, and where b is greater than or equal to a + 14.</p>	<p>AI539366, AI769976, AW172437, AA425434, AA425297, AA279085, AI147845, AL119860, AI382211, AA287851, AA747806, AA933947, AA905535, AW204513, AA235991, AI222124, AA368273, AA287818, AA713651, AA972476, AA235795, AA713778, AF117888, AJ001714, AJ001713, L29148, L29135</p>	
1215	HCRNY14	875810	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by</p>		

1216	HCRQG46	875814	<p>the general formula of a-b, where a is any integer between 1 to 368 of SEQ ID NO:1215, b is an integer of 15 to 382, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1215, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 811 of SEQ ID NO:1216, b is an integer of 15 to 825, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1216, and where b is greater than or equal to a + 14.</p>	<p>AW239403, Z99396, AW392670, AL119522, AW384394, AW363220, AL119497, AW372827, AL119443, AL036418, AL038837, AL119335, AL037051, AL036725, AA631969, AL119319, AL119324, AL119457, U46341, AL119396, AL036858, AL119483, AL119484, AL119363, AL119341, AL119391, AL119355, U46347, U46350, N71828, U46349, U46351, AL119496, AL039074, AL036924, AL042551, AL119418, AL119444, U46346, AL119399, AL042614, AL037205, AL119439, AL038509, AL042965, AL042975, AL134524, AL039564, AL134533, AL134528, AL037085, AL039085, U46345, AL039156, AL039108, AL039109, AL039128, AL042450, AL042984, AL119488, AL037094, AL037526, AL134527, AL134529, AL134538, AL036196, AL036190, AL043003, AL037639, AL042970, AL038520, AL039659, AL042542, AL036767, AL119511, AL042544, AL037082, AL043019, AL043029, AL036268, AL039912, AL037077, AL038447, AL036238, AL119464, AL038851, AL036774, AL042909, AL036733, AL036998, AL037027, AL037178, AL037615, AL036765, AL036719, AL036679, AL036191, AL036886, AL039410, AF105376, AC005411, AF105377, AF168992, AC005224, A81671, AR060234, AR066494, AC005375, AR023813, AR064707, AR069079, AR054110, AB026436</p>
1217	HCRQG63	875815	Preferably excluded from the	M59710

1218	HWLVS38	875816	<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 503 of SEQ ID NO:1217, b is an integer of 15 to 517, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1217, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 760 of SEQ ID NO:1218, b is an integer of 15 to 774, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1218, and where b is greater than or equal to a + 14.</p>	<p>AI671182, AI343459, AA071514, AI917350, AW235354, AA648922, AI985626, AA082291, AI857422, AW139217, AA341262, AI800535, AA913262, Z99396, AL119457, AL119324, AW392670, AL119443, AL119399, AL036418, AL038837, AA631969, AL037051, AL036725, AW384394, AL036858, AL039074, AW363220, AW372827, AL119483, AL119418, AL036924, U46349, AL119497, AL119484, AL037094, U46347, U46351, U46350, AL119355, AL119319, AL119335, AL038509, AL039564, AL039085, AL039156, AL119363, AL119391, AL039108, AL039109, AL039128, AL119439, AL036196, AL036190, AL119444, U46341, AL119522, AL119341, AL037639, AL119396, AL036767, AL037526, AL134527, AL037085, AL119496, AL037205, U46346, AL038531, AL134538, AL036268, AL037082, AL038520, U46345, AI142134, AL038447, AL037077, AL037027, AL037178, AL037615, AL038851, AL036998, AL036733, AL036774, AL036719, AL036765, AL036679, AL036174, AL036191, AL036158, AL036836, AR060234, AR066494, AR023813, A81671, AR064707, AR054110, AB026436, AR069079</p>
1219	HCRNT27	875817	<p>Preferably excluded from the present invention are one or more</p>	AL035461

1220	HCRMT24	875819	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 542 of SEQ ID NO:1219, b is an integer of 15 to 556, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1219, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 134 of SEQ ID NO:1220, b is an integer of 15 to 148, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1220, and where b is greater than or equal to a + 14.</p>	AC007254	
1221	HCRNQ33	875820	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 315 of SEQ ID NO:1221, b is an integer of 15 to 329, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1221, and where b is greater than or equal to a + 14.</p>		
1222	HWLUO71	875821	<p>Preferably excluded from the present invention are one or more</p>	T49153	

1223	HTXRZ02	875822	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 466 of SEQ ID NO:1222, b is an integer of 15 to 480, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1222, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1285 of SEQ ID NO:1223, b is an integer of 15 to 1299, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1223, and where b is greater than or equal to a + 14.</p>	<p>AI193178, AI076316, AI470965, AA703140, N34056, T80181, AI241153, AI952208, R37322, AA385859, W86007, N46975, AA700249, T48765, T87488, R97030, AC004150</p>
1224	HWMBO4 7	875824	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1048 of SEQ ID NO:1224, b is an integer of 15 to 1062, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1224, and where b is greater than or equal to a + 14.</p>	<p>AW027620, AI478256, AA977072, AA479381, AA479885, H39098, AI660057, AI743611, AA724117, AA894537, H00481, AW304843, T73210, AI953325, AA102063, AA770698, AA428456, AI370710, R60534, C03787, AB020650</p>
1225	HCQCC37	875825	<p>Preferably excluded from the present invention are one or more</p>	AL046573

1226	HUVGY13	875826	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 594 of SEQ ID NO:1225, b is an integer of 15 to 608, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1225, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 875 of SEQ ID NO:1226, b is an integer of 15 to 889, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1226, and where b is greater than or equal to a + 14.</p>	<p>AA527277, AW403876, AW403877, AA112026, T67786, AI336206, AI472267, T11388, AI613487, AI889648, AI168361, D25667, AA586553, T18557, T67710, AI445768, AI567831, AI744381, AI921692, AI274006, AI042027, AI240308</p>
1227	HPMFM59	875828	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 725 of SEQ ID NO:1227, b is an integer of 15 to 739, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1227, and where b is greater than or equal to a + 14.</p>	N29001
1228	HCROI42	875832	<p>Preferably excluded from the present invention are one or more</p>	<p>AI378825, AI299691, AI248716, AI207012, AI025488, AI801275, AW139379, AI075931,</p>



1229	HACBB04	875833	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 477 of SEQ ID NO:1228, b is an integer of 15 to 491, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1228, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1582 of SEQ ID NO:1229, b is an integer of 15 to 1596, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1229, and where b is greater than or equal to a + 14.</p>	<p>AI129182, R56213, AI868688, AI540526, AI352622, AI887854, AB014521, AF141884, AC004782</p> <p>AI348155, AI567487, AA482559, AA426355, AA482412, AA195102, N32669, AA722595, AW274254, AI859721, AI003615, AW242302, AI494186, AI394631, AL043629, AI824406, AI015872, AI284359, AW139669, AI942272, AA010713, AI290543, AA496459, AI364660, AI758530, AI368521, AI872567, AI423266, AF192529</p>
1230	HMMAC3 4	875834	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 566 of SEQ ID NO:1230, b is an integer of 15 to 580, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1230, and where b is greater than or equal to a + 14.</p>	
1231	HDPFA20	875836	<p>Preferably excluded from the present invention are one or more</p>	<p>AI476641, AI800220, AA523781, AA688160, AW274475, AA279690, AA831827, AA480351, H23404,</p>

1232	HTGBQ40	875837	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1662 of SEQ ID NO:1231, b is an integer of 15 to 1676, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1231, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 380 of SEQ ID NO:1232, b is an integer of 15 to 394, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1232, and where b is greater than or equal to a + 14.</p>	<p>AA810727, AI689632, AA353334, R28470, AA927802, Z45246, AA279721</p> <p>AI650736, H21389, AI336480, H21432, AI264947</p>
1233	HDPWD53	875838	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 487 of SEQ ID NO:1233; b is an integer of 15 to 501, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1233, and where b is greater than or equal to a + 14.</p>	
1234	HCROZ63	875839	<p>Preferably excluded from the present invention are one or more</p>	T08857

1235	HWABJ67	875840	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 347 of SEQ ID NO:1234, b is an integer of 15 to 361, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1234, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 534 of SEQ ID NO:1235, b is an integer of 15 to 548, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1235, and where b is greater than or equal to a + 14.</p>	<p>AI743586, AA773043, AI378041, AI653756, AW021263, AA934444, AI051436, AA525488, AA515054, AA737382, AI561320, AI566429, AI500523, AI590021, AW169671, AI890838, AI619607, AI890214, AI312428, AI499381, AI624693, AI500061, AI283760, AI340519, AI934035, AI637584, AW021717, AI633330, AW198090, AW087462, AI684279, AI493567, AI609594, AW129659, AI683475, AI906328, AI539153, AI673363, AW081298, AI889133, AL039132, AI963068, AA928539, AI802542, AI251221, AI571439, AI670002, AI591420, AL037454, AI288285, AI698391, AW089840, AI560012, AW169604, AW089439, AI564736, AI285448, AW051212, AW192652, AI633125, AI609331, AI439452, AI963846, AW192701, AA470523, AI471909, AI921379, AI686554, AI609128, AI915291, AW274192, AI610690, AI270183, AI432656, AI929108, AI926790, AI889189, AA769285, AW129106, AI815239, AA768550, AI758583, AL036705, AW163834, AL036780, AI624548, AI887308, AW161098, AI678496, AL039858, AI702073, AI624084, AI246905, AI890223, AL042365, AI524671, AL037582, AL036361, AL037602, AI345543, AA916372, AI702343, AI582932, AL120676,</p>
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	AF116548, AF116547, AF116546, AL133031, AL137538, AL050116, AF111851, I89947, AF090943, AR053103, AL137271, AF069506, AL133557, U35846, AL133080, AL133072, A08910, A08909, I48978, A77033, A77035, AL078602, AL049382, U42766, A65341, E02349, X72889, Z82022, A08913, AL117435, AL122121, M27260, U89295, A58524, A58523, AL133560, AL035587, AL080159, AF183393, AL117460, AL133075, AF090903, AL050149, AF125948, Y07905, AL122110, AC007172, U68387, AL137550, AF113691, AC002471, AC005374, AF113690, AF017437, AF067728, AL049283, AL137459, AF090900, AF106862, S61953, I89931, AL133558, A08916, Y10655, I49625, U92992, I33392, A21625, AF200464, AL110225, E01573, E02319, AF100931, AL117457, Y11587, A76335, AF141289, AL133113, AL050138, AF057300, AF057299, Z83840, X70685, U73682, AC007458, X83508, X82434, AF019298, AC006978, S78214, AL117648, AF091084, AF113019, AF113677, AF153205, AL110221, AL049452, U91329, AF140224, AL080124, AF126247, AL050277, A08908, AL137560, I48979, AF077349, Y13653, AL035458, AF118094, AF087943, AL133640, AL117585, I03321, AF180525, U80742, AL137480, E08516, I00734, AL137463, AJ001388, M19658, A65340, AF118070, AJ242859, AR059958, AF185614, E00617, E00717, E00778, AL137479, AL137476, AC004383, AF078844, X87582, AJ000937, AF106697, AF158248, AL050108, AL133568, AL133565, AJ005690, AJ012755, M84133, A26498, AF076464, U67958, AL122093, AF102578, AL110280, AF118558, AF106827, U00763, AF082526, Y14314, AF177401, S68736, AL117394, A08912, AL137521, AF104032, AF026816, AF097996, U83980, AF079763, X52128, AP000697, AF026124, AL050146, AL050393, A03736, AL049314, X72624, AL117583,

1236	HCRMY91	875841	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 852 of SEQ ID NO:1236, b is an integer of 15 to 866, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1236, and where b is greater than or equal to a + 14.</p>	<p>M77345, AL137256, AF090896, AJ006417, E05822, AR038854, A21103, AL137283, AF118064, AL049938, E03671, AL049430, AR015970, AL137648, X84990, AL122098, AF017152, AF047716, AL133016, I09499, AF079765, X63574, X98834, AL122123, AR011880, AL049423, AF167995, AF119337, AF113694, AL049464, AL137557, AC002464, X96540, AR038969, AJ238278, AL080139, U37359, AL133014, AF030513, A90832, U72620, AF126372, AF003737, X66862, Y16645, M30514, AL110296, I17767, AF044221, X92070, Z37987, AF026008, L31396, AF146568, A12297, L31397, AC002480, AF061943, AF113013, AF100781, AL133067, AF090934, S63521, AL050024, AL134431, AA046904, H05571, R11919, W79925, R11987, R55079, R84811, R53363, H10691, F11225, AA354088, R22842, R19546, AI803682, AI198775, AA452378, AA040404, AI150653, AA307589</p>
1237	HNTRA39	875845	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 785 of SEQ ID NO:1237, b is an integer of 15 to 799, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1237, and where b is greater</p>	<p>AI889332, AI628477, AI275204, AI633956, AW079861, AW118929, AA911538, AI342851, AW300007, R91897, AI623866, AW204145, L44538, AA011077, AI648696, AI914833, AI521684, X62311</p>

1238	HCRPW33	875846	<p>than or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 705 of SEQ ID NO:1238, b is an integer of 15 to 719, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1238, and where b is greater than or equal to <math>a + 14</math>.</p>	AA315737, AA476814
1239	HFCFI37	875848	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 325 of SEQ ID NO:1239, b is an integer of 15 to 339, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1239, and where b is greater than or equal to <math>a + 14</math>.</p>	AL120789, AC003007, AC005632
1240	HCQCL72	875849	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 215 of SEQ ID NO:1240, b is an integer of 15 to 229, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1240, and where b is greater</p>	AI817147, AA907222, H51868, AA281655, AA361371, AI301198, AA911728

1241	HCQCT09	875850	<p>than or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1061 of SEQ ID NO:1241, b is an integer of 15 to 1075, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1241, and where b is greater than or equal to <math>a + 14</math>.</p>	<p>AW021240, AA535264, AA149863, AA694163, AI422346, AI472109, AI811633, AA931734, AI419485, AI302192, AI288249, AA410584, AI418912, AI049618, AI089786, AA911728, AA149808, AI700267, AI299240, AA501370, AI814823, AA232714, AI865849, AA232212, AA825451, AI718827, AI281840, AA932086, AI283229, H60430, AI471234, H60476, AA631685, AA576637, AI301198, AI949336, AA368973, AA236013, C01314, AI860871, AA361371, AA281786, AA327052, AA907222, AI857607, AI817147, AA281655, AA411619, H51868</p> <p>AC006512, U47924</p>
1242	HCRMR12	875851	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 322 of SEQ ID NO:1242, b is an integer of 15 to 336, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1242, and where b is greater than or equal to <math>a + 14</math>.</p>	
1243	HCIAE18	875852	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 738 of SEQ ID NO:1243, b is an integer of 15 to 752, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1243, and where b is greater</p>	<p>AA524300, AI732383, AA570296, AI732336, AA515389</p>



1244	HHFHU39	875855	than or equal to $a + 14$ . Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of $a-b$ , where $a$ is any integer between 1 to 750 of SEQ ID NO:1244, $b$ is an integer of 15 to 764, where both $a$ and $b$ correspond to the positions of nucleotide residues shown in SEQ ID NO:1244, and where $b$ is greater than or equal to $a + 14$ .	AI271571, AA452037, AI424866, AA423988, AA483361, AI266636, AA742931, AI266634, AA424028, AA702780
1245	HCOQAW29	875856	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of $a-b$ , where $a$ is any integer between 1 to 354 of SEQ ID NO:1245, $b$ is an integer of 15 to 368, where both $a$ and $b$ correspond to the positions of nucleotide residues shown in SEQ ID NO:1245, and where $b$ is greater than or equal to $a + 14$ .	R33721
1246	HBM3DM3 3	875858	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of $a-b$ , where $a$ is any integer between 1 to 497 of SEQ ID NO:1246, $b$ is an integer of 15 to 511, where both $a$ and $b$ correspond to the positions of nucleotide residues shown in SEQ ID NO:1246, and where $b$ is greater than or equal to $a + 14$ .	AA857451, AA857804

1247	HKLS32	875863	<p>than or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 417 of SEQ ID NO:1247, b is an integer of 15 to 431, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1247, and where b is greater than or equal to <math>a + 14</math>.</p>	AA405791, AI524014, AI380383, AW082968, AW342068, AA911893, AI824001, AI692746, AI433518, AI949654, AW170143, AI277105, AI266424, AI272885, AI318386, AI937056, AW058565, AW028276, AI075130, AI632588, AI393303, W99355, AI470310, H87135, AI807925, AI027883, AI695062, AI277524, AI201665, AA099404, AI471922, AA384650, AA364750, AA099465, AI359471, AI961082, AW338912, AW302395, AI702221, AW059776, D20616, AF086516, AI653206
1248	HYACE34	875864	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2044 of SEQ ID NO:1248, b is an integer of 15 to 2058, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1248, and where b is greater than or equal to <math>a + 14</math>.</p>	AI492300, AA155864, AI336122, AA507001, AI805390, AA213868, AA504365, AI805573, AI267513, AA480597, N28434, AA829763, H86647, W99382, R82575, AA213776, AW402251, AI277875, AI220789, AA405669, AA281807, AW023046, AA025280
1249	HNTTC18	875865	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 929 of SEQ ID NO:1249, b is an integer of 15 to 943, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1249, and where b is greater</p>	AL041644, AI652238, AI125934, AI972064, AI373883, AA401082, AA403146, AA587259, AW152027, AA648691, AA632889, AA572909, AA528434, T52508, T04918, T63002, AI625085, AI817337, AA922661, AA091326, M27878

1250	H2CAA34	875868	<p>than or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 2217 of SEQ ID NO:1250, <math>b</math> is an integer of 15 to 2231, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:1250, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	<p>AA913891, AA071067, AW247518, AA125853, R56714, AA576929, AA307834, AA204972, AA445946, H98812, AI028402, AA127005, AA223811, AA101503, R72151, H53723, H06566, H29389, AA182597, AA126153, AA232436, AA306744, T35189, AA164773, AI458548, T70821, R10266, Z21129, AW386767, AA436573, AI610191, H29413, AA301432, AA724488, AW449887, AI242268, AI525912, AW368592, AW377757, AW390796, AA344660, AA307848, AA715437, AW361336, AI248847, AL040968, AA938368, AW361341, AA676800, AW368596, Z21101, AW451729, AF191018, Z94761</p>
1251	HWLQA33	875871	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 398 of SEQ ID NO:1251, <math>b</math> is an integer of 15 to 412, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:1251, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	<p>AA436794, R09306, AA384577, AC006211</p>
1252	HCQCT65	875874	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 402 of SEQ ID NO:1252, <math>b</math> is an integer of 15 to 416, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:1252, and where <math>b</math> is greater</p>	

1253	HWHPI50	875884	<p>than or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 2721 of SEQ ID NO:1253, <math>b</math> is an integer of 15 to 2735, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:1253, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	<p>AW026114, AW418826, AW341657, AA910088, AI860171, AW190146, AI700326, AI089966, AI670850, H18740, AI093699, AI159857, AA996095, AI401266, AI240251, AW242162, AA594503, AI056938, AI864216, AA506903, AA426024, AA724498, AI263294, T75461, Z43179, AA443290, H25984, AA514196, R61755, AA526102, AA476713, F13159, T19223, Z39262, AA705253, AA609888, AA659875, F02603, R34659, AA319603, AA759148, R49189, AI538091, F13136, R61756, R21716, AA300990, F06309, F10761, AI865079, AW337918, AI889018, AA834239, AA096413, AI242996, F06308, H18653, AA774400, R46606, AW382812, N53750, AW382785, AL121653, AL121658, AI703451</p>
1254	HCRQD12	875886	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 679 of SEQ ID NO:1254, <math>b</math> is an integer of 15 to 693, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:1254, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	
1255	HNHHM31	875888	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 448 of SEQ ID NO:1255, <math>b</math> is an integer of 15 to 462, where both <math>a</math> and <math>b</math> correspond to the positions of</p>	<p>AA644044, AW135276, AA887861, AW137420</p>

1256	HCRQG23	875891	nucleotide residues shown in SEQ ID NO:1255, and where b is greater than or equal to a + 14.	AI022242, AW410996, AI800815, AI814040, AW264268, AA191425, W72080, W94651, AW015105, AA443454, AA443318, AW410985, AI597605, AW273210, AW250450, AW411145, AI190182, AA993201, AA403278, AA430513, W94612, W96124, N54325, AI357461, AA190985, W77863, AA643738, AL120980, AA113214, AA858265, AA993185, AI375010, AI498876, AA829321, AA701490, AA132962, AA287691, AI277849, AI301164, AA251325, AW015857, AA403106, W60258, AA084833, AI253793, AA775859, W05830, AA243176, AI038024, AA766410, AA805677, AI049993, AA775554, AI039481, H80596, AA196760, AA430648, AA804241, N77873, W96125, R69970, H80623, AI219581, H67651, AA190668, C01701, AI352459, AI275174, AA732213, AA128877, H30387, N23878, T12121, AI015455, H80540, AI220709, H67511, H18761, AA485022, AA251518, AA243193, AA505285, AA779102, H82765, AA570290, H52438, H67114, H71899, R69971, H52437, AA187869, AA505681, H67510, AA626883, AA232342, H71112, AA995473, AA456466, AI142314, H80657, AA454572, AA213633, AL119457, AL119399, AL119324, AL042544, AL134524, AW392670, AL119484, AL119439, AL119443, Z99396, AW372827, AL119391, AW363220, AL119319, AL134530, AW384394, AL119522, AL134519, U46347, AL119497, U46350, AL119363, AL119418, AL134528, AL119483, U46351, AL119355, U46349, U46341, AL119341, AL119335, AL119396, AL119444, AL119464, AL119496, AL043003, AL037205, AL042614, AL119401, U46346, AL134525, D21063, D83987, X67334, AF004105, D86725, AR060234, AR066494, A81671, AB026436, AR054110,
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1257	HKLSB39	875894	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1257 of SEQ ID NO:1257, b is an integer of 15 to 1271, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1257, and where b is greater than or equal to a + 14.</p>	<p>AR069079, AR043113  AA595346, AA243787, AA024609, AA024578,  AA076356, AA076467, AA760927, AI272832,  AA243135, H17412, F06362, R25565, AI829044,  AA400326, T26645, AA243569, AW020146, AI744718,  AW384427, AA768909, AA743098, T77293, AA024577,  AA723998, U35376, D70831, AC002519, AF038179,  AA400327</p>
1258	H2CBN05	875897	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 835 of SEQ ID NO:1258, b is an integer of 15 to 849, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1258, and where b is greater than or equal to a + 14.</p>	<p>AA307799, AW292094, T70856, AI161296, AA235668,  AW296027, AI699099, AI693823, AI693216,  AI992018, AA115026, AI681528, AA136109,  AA732568, AA776036, AA643914, AA258666,  AA416754, AI061590</p>
1259	HCQDT85	875899	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 608 of SEQ ID NO:1259, b is an integer of 15 to 622, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1259, and where b is greater</p>	<p>AI500310, AI672249</p>

1260	HARAJ31	875900	<p>than or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 457 of SEQ ID NO:1260, b is an integer of 15 to 471, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1260, and where b is greater than or equal to <math>a + 14</math>.</p>	AA317663, 265370
1261	HCRMQ35	875904	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 633 of SEQ ID NO:1261, b is an integer of 15 to 647, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1261, and where b is greater than or equal to <math>a + 14</math>.</p>	AI589507, AW009664, AA703098, AI453542, AA532750, N67298, AI148172, AI095316, AA708739, AW022231, AI601197, AI457493, AI580184, AA922944, AI922763, AI023347, AI096333, AA633368, AW023348, AA477261, AA693591, AI870748, AW274004, W78756, AI298179, W78055, AI057523, AI126504, AI248086, AA873476, AI679385, AI679894, AI190295, AW073346, N21034, AA039311, N22989, AA508686, W80491, W86880, AI361360, AI540214, AA938881, W79149, AW368422, AI432392, AI078371, R61323, AA039411, AA932937, AA829705, AW073773, AA002095, N67361, H59053, AA076438, AA535629, AA912096, W21314, AA610431, AI936749, T66278, AW405920, F12299, N4193, AA508849, AA884012, AA890651, W81519, N93501, AA480270, C00277, R38195, AI332894, T16604, W21320, R4910, N78644, AI478709, AI125999, AI590819, AA558779, AI300933, AW263399, AI085918, AA974965, AI741413, N93508, W81635, AW194811, N93088, AI630149, R56244, W24742, AW205755, AA991876, AI972554, AA004362, AI989930, AI760486, AI491861, AI581783, AA991538, AI969278, Z39245, AI650517, AW361735,

1262	HMUBG30	875905	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 822 of SEQ ID NO:1262, b is an integer of 15 to 836, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1262, and where b is greater than or equal to a + 14.</p>	<p>AW361839, U90904, AI242039 AA459525, AA402831, H93300, W45229, AC004806, AC004056, AL031116</p>
1263	HCQAH30	875906	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 298 of SEQ ID NO:1263, b is an integer of 15 to 312, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1263, and where b is greater than or equal to a + 14.</p>	
1264	HWDH30	875907	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 176 of SEQ ID NO:1264, b is an integer of 15 to 190, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1264, and where b is greater</p>	<p>AF161019, AJ131890</p>



1265	HCQAM30	875908	<p>than or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 557 of SEQ ID NO:1265, b is an integer of 15 to 571, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1265, and where b is greater than or equal to <math>a + 14</math>.</p>	AA431300, AW450428, AI688064, AI768150, AI123686, AW242691, AI052046, AA890607, AA758061, AA609531, AI797591, AA723978, AA934785, AA431657
1266	HAGEA31	875912	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1460 of SEQ ID NO:1266, b is an integer of 15 to 1474, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1266, and where b is greater than or equal to <math>a + 14</math>.</p>	AA305680, H64054, AA159569, AA378423, AA321559, AA237093, AL117344
1267	HCROZ66	875913	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1391 of SEQ ID NO:1267, b is an integer of 15 to 1405, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1267, and where b is greater</p>	AI823992, AW082308, AI816135, AI589007, AI566535, AW272765, AA766315, AW242239, AA279943, AI816094, AI014927, AI038579, AA578848, AI476548, AI354483, AA973322, AA992180, AI392988, AA327978, AA769228, AA506076, AI653752, AI370562, AA172248, AA343765, AI282882, AA279942, AA506075, AL137710

1268	HDPBY50	875914	<p>than or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1439 of SEQ ID NO:1268, b is an integer of 15 to 1453, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1268, and where b is greater than or equal to <math>a + 14</math>.</p>	AI819116, AW372211, AW372198, AI583182, AA176112, AW134519, AI628367, AI478195, AA143793, AI394104, AI697987, AI675294, AW390678, AI768078, N24394, AA101252, AI830602, AI628409, AI438987, AI810299, AA020980, R22198, AI890121, AI671411, AA733134, H44639, AA581997, AI862828, AW139467, AI866902, AA857679, H97045, AA465732, AA340274, AA974904, AA731664, AA494109, AI811317, AI338111, R78337, H99145, AI200103, AA291168, AA731663, AA327229, AW363178, AA021065, D79177, R77963, R22252, AI581618, AA026878, AA501786, AA216611, W32118, W31626, H43598, AA148177, AA730560, AI472513, AA465134, C75353, C01240, AA978055, AW369487, AA731711, AI538764, AA731241, AL042191, AW193620, AW025279, AI096771, AW243451, AW150750, AW029457, AI537187, AI421662, AI571442, AI224373, AI433611, AI491710, AI696583, AA830333, W45039, AI927233, AI671429, AI370623, AW021717, AW150214, AI095530, AI289791, AA613255, AW089379, AW020455, AL045859, AW168700, AI678681, AL040011, AI633125, AW194014, AI351737, AI831938, AI499325, AI491852, AI699020, AI678446, AI468622, AI932660, AI886355, AI952797, AI696714, AI817733, AI889449, AI309306, AW080157, AW087837, AA761557, AI656270, W38553, AW167926, AI493836, AW021662, AW002327, AI524139, AW089844, AA630788, AI954721, AI568293, AA760851, AI470717, AI342210, AA954134, AI445620, AW163834, AI613038, AI623835, AW410842, AW083750, AW023871, AA923096, AI867017, AI368579, F36855, AI886452, AI680369, AI658566, AI801325, N22276, F37323, AA829775, AI923989, AI690813, AI538885,
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1269	HDTKD18	875915	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1339 of SEQ ID NO:1269, b is an integer of 15 to 1353, where both a and b</p>	<p>AI866469, AL042593, AI648699, AA814517, AW293496, N25033, AW151136, AW051898, AW183620, AW193125, AI638644, AI862896, AP000501, AL133047, AL080234, AL050116, AL137271, AB007812, E03348, E03349, AL117587, AC005886, AF118094, AF013214, E12747, A65341, AF115392, AF047716, AF124728, AL117460, AJ005870, L25851, I33984, AL133067, AF002672, AR022283, AL137258, AL050172, AL137533, AF185614, I89947, AC002287, AC004690, AJ005690, AR038854, AR050959, AR012379, X93495, AF000167, AC002540, M85164, AL133015, AL137548, A18777, Y14314, AF126372, E04233, AF200464, I09499, AL133619, AL133084, I22020, AF036941, AR062106, AL023657, AL137641, S77771, X84990, AL137711, X72889, AF161418, AL137650, AF008439, S59519, AL133016, U37359, AL133371, AF054289, AF095901, A41579, AL133665, AF100931, X66862, AL137478, AL080159, AF136009, AL122100, AF199027, AR034821, S82852, A03736, AF102578, Z97214, S65585, A08907, AR020905, AR066485, X70514, U96683, S83440, AF032666, X00861, AC018767, X61399, AF044323, U36585, AL137292, AJ012755, AF182215, AC006013, AF098484, AL050024, AB031064, AL133088, AL049423, AR059958, X68560, AF124435, U72620, AL117649, X06146, AF090901, AL049276, AL049447, AF038847, AF107847, AR029490, E12806, AL137716, AL137495, X99971, AF150103</p> <p>AI796221, N64043, AA036820, AW237633, AA485589, AA036775, AA485425, AI270597, AI242326, AW001030</p>
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1270	HHPGT16	875923	correspond to the positions of nucleotide residues shown in SEQ ID NO:1269, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1555 of SEQ ID NO:1270, b is an integer of 15 to 1569, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1270, and where b is greater than or equal to a + 14.	AI307250, AI271439, AI650441, AI017475, AI251828, AI672237, AI374969, AI350623, AI334985, AA483351, AA251224, AI146704, AI000570, AA442545, AA629033, AW002826, AA489129, AI491723, AI208598, AI886308, AW149502, D45489, AL049146, AI143491, AW020704, AW022820, AW369852, Z43342, AI221861, AA779644, AI221998, AL079690, T18542, AB002371, AL049382, AF176816
1271	H2CBF28	875924	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 559 of SEQ ID NO:1271, b is an integer of 15 to 573, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1271, and where b is greater than or equal to a + 14.	AA461032, AA307375, AF155739
1272	HCQDM28	875925	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 768 of SEQ ID NO:1272, b is an integer of 15 to 782, where both a and b	N30135, AI767701, AI633623, AI140698, AW269969, N34283, AA610009, T65377, AA535713, AA135305, AA904500, AI271558, AW043844, AW168046, R42844, AA830555, H20852, N51615, AW168340, AA779492, D29317, AW149189, T77049, AA910171, AA679759, AI262864, H22970, H08110, AA136386, R40094, F09407, T15987, T35272, AI470445, H08109, AA361165, H20903, R21459, H22760, R14782,

1273	HUKFO71	875926	correspond to the positions of nucleotide residues shown in SEQ ID NO:1272, and where b is greater than or equal to a + 14.  Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 280 of SEQ ID NO:1273, b is an integer of 15 to 294, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1273, and where b is greater than or equal to a + 14.	T65454, F11747, AL117635  Z42318
1274	HCQAT28	875927	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 673 of SEQ ID NO:1274, b is an integer of 15 to 687, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1274, and where b is greater than or equal to a + 14.	AW195495, AI927965, AI660501, AI830732, AI271628, AI224848, AI271624, AA227881, AA579040, AI080263, AI016903, AW074630, AW119163, AI796459, AA194238, AA251354, AA193292, AA314587, AJ242739
1275	HCYBC56	875932	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 804 of SEQ ID NO:1275, b is an integer of 15 to 818, where both a and b	AA305033, AW248879, C17203, AI915163, AI298556, N73317, AI474187, AI401089, AI634988, AA427374, AI190151, AW043949, AA343654, AI690026, F03312, AI821377, AI766223, AI948443, AI820529, R42572, F03338, AI032325, AW088758, AA621333, AL046205, AI352330, AA156447, AA261784, T64484, AA663522, AI041540, AI128869, F33912, R38482, N94950, AI817198, AA433949, AI223036, AA456954,

			correspond to the positions of nucleotide residues shown in SEQ ID NO:1275, and where b is greater than or equal to a + 14.	AW134514, AA362770, AI738910, AA931551, AA856757, AW079224, AA856766, R99371, AI431703, AW023137, AA525926, AI784057, AA844907, AW168420, Z94056, AC007160, AC005874, AF134471, AL049872, AC007263, AC007064, Z97055, AC006480, AC005799, AC005616, AC006088, AC004707, AL035408, AC002375, AC010206, AL024507, AC004702, AC005102, AC004679, AC007376, AC004542, AC005011, AC005207, AL117338, AL031767, U91318, AC005953, AC005036, AP000111, AP000043, AC005477, AC005228, AL031665, AL035414, AC005578, AC004791, AP001053, AC007276, AC004921, AL133289, AC006387, AF001549, AC004887, AC006582, AB020863, AL139054, AC005993, AL109837, AL132774, AL035686, AP000108, AP000040, AC004862, Z98744, AC003007, AC007880, Z95126, AC011604, AE000661, AC005013, AC005295, AL049869, U82670, AC007225, AL022326, AL031681, AC004605, U85196, AC007402, AC009501, AL034420, AC003964, AC007546, Z99496, AC009946, AC006059, AP000509, AC005145, AC004976, AC005095, AC002384, AL049743, AL121578, AL078593, AC008115, AL121657, AC007510, AP000240, U80460, AC007773, AC005792, AC005482, Z98043, AE000659, AC004817, AL022100, AL035089, Z82245, AC005547, AC004825, AL035608, AC003991, AL078475, AC004510, AL022727, AC012627, AB003151, AC006167, AC005027, AB004907, AC005878, AL096711, AC004029, AP000511, AF111169, D84394, AP000688, AC011456, U50871, AP000280, AL109985, AC004838, AL035420, AC002390, AC002299, AB023050, AC002992, AC003037, AP000107, Z99715, AC004185, AC006137, AP000039, AL109956, AL109654, AF015416, AC007380, AC006040, AC004067, AC006204, AL049564, U85198, AC004859, AC004896, AC006536,
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1276	HAAAC11	875933	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 836 of SEQ ID NO:1276, b is an integer of 15 to 850, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1276, and where b is greater than or equal to a + 14.</p>	<p>AP000131, AP000209, AC002464, AC004700, AC003670, AF207955, Z79996, AP000283, AC002289, U95740, AC004002, AC006928, AC007058, U52112, AC007240, AC005380, AL121591, AL109938, AC005731, AL035069, AP000282, AC004106, AC006991, AC004911, AF002993, AP000501, Z69712, AF096876, AC002331, AL023805, AC007450, AC006048, X96421, AC005483, AP000201, AL034554, AC005138, AF165142, AP000097, AC007280, AC004472, AC007024, AC004409, AP000248, AP000144, Z92547, AL031053</p>
1277	HNHO184	875934	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 486 of SEQ ID NO:1277, b is an integer of 15 to 500, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1277, and where b is greater than or equal to a + 14.</p>	<p>AA417136, H78660, AW292282, AC000378</p>
1278	HRABT72	875935	<p>Preferably excluded from the</p>	

			present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 547 of SEQ ID NO:1278, b is an integer of 15 to 561, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1278, and where b is greater than or equal to a + 14.	
1279	HWLEG68	875936	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1653 of SEQ ID NO:1279, b is an integer of 15 to 1667, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1279, and where b is greater than or equal to a + 14.</p> <p>AW377286, AA877900, AW374882, AW374986, AW363009, AW374838, AI791951, AW374892, AI431674, AW374858, AW363038, AW363010, AI821099, AW374992, AI940416, AW374993, AW375002, AI821845, AA633302, AW374878, AW363039, AW274215, AI732655, AI573096, AW374894, AA581944, AW191851, AW451240, AI360701, AI273759, AI280846, AW451809, AA053660, AW452362, AW293665, AA535532, AI620830, AA961152, AA582019, AA053763, AA295334, AI318604, AI278909, AW374321, AW080947, AW351525, AA376765, AA366856, AW191847, D25711, AA377129, AA601073, T24571, AW376784, AW376582, AI708873, AW243603, AI991190, AW376686, AW376776, AW376658, AI828388, AW291776, AW006478, AW193257, AW376625, AI254661, AW376692, AI458795, AW376516, AW364147</p>	
1280	HSIDV66	875937	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 443 of SEQ ID NO:1280, b is an integer of</p> <p>AI431674, AW376784, AW376582, AW376686, AW376658, AW376776, AW451240, AI360701, AW452362, AW451809, AA535532, AW376625, AA961152, AI648663, AI284509, AI042628, AI815855, AI476109, AW150578, AI045266, AI866002, AI866573, AL041772, AW084219, AI289937, AI274769, AI863240, AI250663,</p>	



15 to 457, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1280, and where b is greater than or equal to a + 14.	AI364788, AI433976, AW051107, AI620284, AI590120, AL045500, AI433157, AI560099, AI539771, AI345608, AI521012, AI537677, AW083804, AI521560, AI500659, AI801325, AI500523, AI284517, AI500706, AI491776, AI445237, AW151138, AI500662, AI273142, AI633493, AI434256, AI284513, AI888118, AI868831, AW149227, AI828731, AI619716, AW082040, AW102785, AW103893, AI561299, AI608676, AI886124, AI554218, AW079159, AI259862, AI612759, AI867042, AI888953, AI280661, AI537617, AI919345, AA427700, AI537515, AI349598, AI251830, AI873644, AI366549, AI636719, AI340582, AW103371, AL042551, AI611743, AI500039, AW161579, AI955906, AI872711, AI571909, AI801322, AL043326, AL040243, AW162071, AI284131, AI433037, AI174394, AI923768, AI888661, AW268220, AL119863, AI334450, AI340603, AI498579, AI445165, AL036759, AW023590, AW302988, AI687065, AI446003, AW074993, AI224992, AW059837, AI251205, AI696626, AI344935, AI678762, AI539153, AI610645, AL036214, AI828367, AW262565, AI439762, AL120853, AW087445, AI499986, AI633419, AA225339, AI538716, AI689420, AW301300, AI097248, AI453322, AI815232, AI269696, AW190042, AL079963, AI922676, AI680498, AW071417, AI963216, AI348897, AW082594, AL119791, AI922901, AI282326, AI888944, AW088134, AI589993, AI648684, AI687465, AW022682, AW403717, AW167410, AW129106, AI800453, AI800433, AI468872, AI866608, AW238730, AW088903, AI829327, AW081255, AI308032, AI889189, AI497733, AI308035, AI275175, AW169653, AL038605, AA640779,

	AI921176, AI434223, AI689175, AA470491, AI343059, AL040241, AA508692, AI292193, AI446373, AL037454, AI349933, N80094, AI349256, AW196141, AI805638, AI569616, AI824557, AI587288, AL121328, AA494167, AA974049, AL038779, AI873604, AL036361, AL036403, N33175, AI336575, AI349645, AW117746, AL110402, AL036274, AI799199, AA572758, AI540832, AW269097, AI926790, AW002342, AW050522, AL038445, AW089179, AI312428, AI554427, AI564719, AI891157, AI696819, AI281772, AI889376, AI932794, AI857760, AI499463, AI524671, AI608936, AI699011, AW051258, AW085667, AI921248, AI611738, AW102761, AI619502, AI677796, AI632408, AI306613, AI802542, AI569583, AI952360, AI633125, AI499285, AI886753, AI312152, AI274013, AI564723, AI933589, AW026882, AI627988, AI783504, AA420758, AI869367, AL036869, I48979, I48978, AB019565, A08916, I89947, A08913, A08910, AL133016, I89931, I49625, AL110196, AL133080, AF106862, AF079765, AL122050, AF113013, AL133560, AF146568, AF090896, E03348, AL049382, AL049314, AR059958, AF113689, Y11587, A08909, AF113676, S68736, AL137557, AL133093, AL049466, AF113690, E07361, Y16645, X84990, AL137527, AL133565, AL080060, AJ242859, AL122121, AF118064, AF118070, AL049430, AF113699, AL133640, AL080137, AF061943, AL050146, AF091084, AL117583, AL117585, AL122098, AF090903, AL050116, AF177401, AF104032, AL122123, AF090934, A65341, Y11254, S78214, AL110221, AF125949, AL122093, AF078844, AF113019, AL049300, AF097996, AF111851, Z82022, AF183393, AL137538, AL137463, AF090901, AL050393, AR011880, AL133557, AF017152,

			AL133075, AF158248, X93495, U72620, A93016, AF118094, AF113694, X82434, AL050024, AJ000937, AL049464, E02349, AL050277, AL137459, AL117460, E07108, AF090900, AL117457, L31396, U42766, AL133606, AL137521, L31397, X96540, A58524, AL049452, A58523, AL137550, U00763, AJ238278, AL050108, AL080124, AL117394, X63574, I03321, AF017437, AF113677, A77033, A77035, I33392, AL137271, AF113691, AL080127, AL050149, AF125948, AL117435, X72889, AF090943, AL096744, AL110225, U80742, AL050138, U91329, AL122110, AL137283, AL049938, AL137648, A12297, X70685, AL133113, U35846, A03736, X65873, AL080159, I42402, AL133072, E15569, A08912, I09360, AF087943, AL049283, AL110197, U67958, X98834, E08263, E08264, AF067728, AL137523, AR000496, U39656, I26207, AL122049, AL133077, AL050172, A93350, AJ012755, AL133104, AF111112, A07647, AF119337, AL137560, AF003737, AL137556, AF153205, Y14314, AL133014, AF000145, AL110280, AF026124, AL133568, AF185576, AF026816, AF162270, AL117440, AR038854, Z72491, AF106827, U96683, AF057300, AF057299, S61953, E04233, L30117, AL117432, AL137476, I17767, AL137273, AL122111, Y09972, E02221, AR038969, A90832, AL133067, AL137526, A08911, A45787, AL133098, AF079763, AL137480, AR013797, I00734, U78525, L19437, X87582, E00617, E00717, E00778, AC006112, AC004093, X62580, Z37987, AL080074, AJ006417, AC004878, M30514, X92070, AL080086, E05822, AF067790, AF095901, AL137478, U68387, AL122118, AL050092, E08631, Y07905, U49908, U58996, AC006336, AL022147, AF210052, AF111849, AL137705, AF132676, AF061836, AL023657, AL137533, AL137292, AF008439, AF100931 AI479334, AW38880, AI969482, AA740980,
1281	HWAAD15	875938	Preferably excluded from the

1282	HUFFD27	875939	<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 709 of SEQ ID NO:1281, b is an integer of 15 to 723, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1281, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 317 of SEQ ID NO:1282, b is an integer of 15 to 331, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1282, and where b is greater than or equal to a + 14.</p>	<p>AI151466, AI670122, AA877322, N63143, AI422330, AA694453, AA766111, AI277749, D20155, AI633803, AA910174, AW002649, AF102851</p> <p>T81216</p>
1283	HWLMZ30	875940	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 333 of SEQ ID NO:1283, b is an integer of 15 to 347, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1283, and where b is greater than or equal to a + 14.</p>	<p>AW295800, AW449384, AI341114, AA886955</p>
1284	H2LAJ89	875941	<p>Preferably excluded from the</p>	<p>AA314048, D80168, D59695, D80949, D52291,</p>

			<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 904 of SEQ ID NO:1284, b is an integer of 15 to 918, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1284, and where b is greater than or equal to a + 14.</p>	<p>C14298, D51079, C14227, AW360780, C14407, D81111, D80064, D80290, D59927, D59627, D80227, D59502, D59859, D80269, D80195, D51799, D58283, D80166, C14331, C15076, D59467, D51423, D59619, D80210, D80391, D80164, D59275, D80240, D80253, D80193, D81030, D80043, C14389, AW352172, D80212, D80022, D57483, D80038, D80378, D80196, D80188, D80219, D50995, D59787, AW377661, D59889, D59610, D50979, D80366, D80045, D80024, D80241, AA305409, F13647, AI557751, T11417, C06015, Z21582, D58101, C75259, D51060, C14014, D80258, D59503, AA514188, D51022, AA305578, D58246, D51213, D45273, T03048, AW377669, AI557774, D80248, D80014, D80228, T02974, C16955, D59484, D52059, D81026, AA514186, C05695, AI535686, D80268, Z33452, D80302, AA514184, D80439, D80522, D80133, D80251, D80247, T03116, AI535961, H67854, H67866, AA027769, D51103, AI525216, AI525228, D51053, T02868, AI525969, C03092, D59373, AA809122, N66429, D51759, C14973, D59551, D31458, C14344, D59317, D80157, C04682, D51221, D59474, Z30160, AI525238, D59653, C14046, C13958, H67858, AI525242, AI525222, C14957, D60010, AI525923, D45260, AI525920, AA305720, AF048722, AB006320, AF048720, AF048721, AJ222971, AF048724, U69961, U70132, AB006321, AF048723, U80010, AF039832, U80036, AJ222972, U80011, AF076640, AF077092, AF155206, AF217647, AF063935, AB010386, I82448, A84916, AJ132110, A62300, A62298, AR016808, AR018138, AF058696, I82446, U37689, X64588, AR008278, AB028859, I81198, AB019242, A47134, A82595, AR060385, I14842, AB002449, I79511, AR054175, AR008277, AR008281</p>
1285	HSPBY20	875942	<p>Preferably excluded from the present invention are one or more</p>	<p>AW237287, AW363468, AW363480, AW363473, AW363477, AA121686, AW363466, W72522, AI828975,</p>

1286	HE2DS24	875946	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 3197 of SEQ ID NO:1285, b is an integer of 15 to 3211, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1285, and where b is greater than or equal to a + 14.</p>	<p>AI559999, AI804778, AI674566, AI129403, AA533052, AA527974, AI363501, AA143578, W51847, AW300353, AI831152, AA143579, AI741918, AA039996, W51848, W76081, AW117710, AI168002, AA311143, AA441903, N31268, AI884441, AI632722, AI869640, AA811715, AA505929, AW304874, AA847969, N59481, AA559159, AI695051, AA112361, AA558272, AA000001, AI720005, AI039160, AA039941, AI342286, AI497588, T06998, AA631737, AI571810, W80521, AA861746, AI985608, W80522, AI869233, AA902266, AA358008, AI301584, AA988922, AA706417, AW363471, AI460367, W81055, Z44588, AI276195, AA995745, AA370238, AI471184, AI358624, W93499, AA731776, AA225687, Z25022, R93719, Z33579, R93772, N22881, AA813411, R96999, T34389, AA442009, AW363465, AI707586, AA992785, AA329788, AW363476, T63311, C03451, AA527798, AW293240, AW363475, AW196088, T59616, C00776, T59728, Z28725, R96942, AI401471, AI985365, AA090503, H89254, AA091375, N76452, AA084311, AI121286, AA416534, AA635126, H25949, AA247310, N72061, N76425, T10848, AI868319, U95742, AC007216, AC007226</p>
1287	HSLFO26	875950	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 776 of SEQ ID NO:1286, b is an integer of 15 to 790, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1286, and where b is greater than or equal to a + 14.</p>	<p>AI436213, AI376989, AW272461, W67633, AW103191, AI460071, AI339966, AA309909, AI382859, AL035070</p>
				AA353689

1288	HCQAH22	875951	present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 377 of SEQ ID NO:1287, b is an integer of 15 to 391, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1287, and where b is greater than or equal to a + 14.	FI2035, H11818, T65663, H07096, H06077, F12478, R17257, T74513
1289	HHEYK87	875952	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 378 of SEQ ID NO:1288, b is an integer of 15 to 392, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1288, and where b is greater than or equal to a + 14.	
1290	HCRQN90	875954	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 115 of SEQ ID NO:1289, b is an integer of 15 to 129, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1289, and where b is greater than or equal to a + 14.	R05444, R05547, H24799, N24201, N28584, N31653,

1291	HCQDT05	875955	<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 430 of SEQ ID NO:1290, b is an integer of 15 to 444, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1290, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 659 of SEQ ID NO:1291, b is an integer of 15 to 673, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1291, and where b is greater than or equal to a + 14.</p>	<p>N34107, AA193424, AA251321, AA251589, AA278204, AA287679, AA286744, AA494343, AA732455, AA740478, AA812121, AA814394, AA830316, AA877099, C04694, AA397959, AA435871, AA437027, AA442854, AA449086, AA449518, AA431365, AA732757, AA757686, AA759030, AI074034, AI082779, Z25143, Z28808, AI341874, AI141529, AI143886, AI149785, AI290312</p> <p>AI681892, AA861619, AI693051, AA009602, R67318, AC004908, AC000386</p>
1292	HACBI44	875967	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 358 of SEQ ID NO:1292, b is an integer of 15 to 372, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1292, and where b is greater than or equal to a + 14.</p>	
1293	HHEWX30	875971	Preferably excluded from the	<p>AW177053, T85527, H66913, H53191, N78201,</p>



1294	HCQCL24	875972	present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1190 of SEQ ID NO:1293, b is an integer of 15 to 1204, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1293, and where b is greater than or equal to a + 14.	AW377523, AA234861, H51769, AA007382, AI783820
			Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 460 of SEQ ID NO:1294, b is an integer of 15 to 474, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1294, and where b is greater than or equal to a + 14.	H81368, R11282, T98326, AC006077
1295	HE8NK61	875974	Present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 436 of SEQ ID NO:1295, b is an integer of 15 to 450, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1295, and where b is greater than or equal to a + 14.	AC005007
1296	HWLCA48	875976	Preferably excluded from the	AI005521, AI810382, AI659500, W92352, AI933284,

			<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 379 of SEQ ID NO:1296, b is an integer of 15 to 393, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1296, and where b is greater than or equal to a + 14.</p>	AA812596, AI400309, AW197587, AW192260, AI949417, W92316, AA722528, AI499349, AW300547, AW025996, AW172287, AW117376, AA194825, AI148427, AW292395, AA903846, AI018563, AI493973, AI082262, AI344368, AI765916, AA879432, AA961861, AW236495, AA912973, AI597682, AA459703, AI207327, N30720, AA936502, AI709271, AA877895, AA687402, AI420803, AA687115, AA504275, AI749696, AI472028, AA149279, AI383228, AI242850, N79884, AA149265, AI352279, AI363025, AA576875, AA809139, AI246634, AI439699, AI143444, AI918503, AI768616, AI970288, AA411377, N62978, AW351635, AW177011, AW167933, AI380451, AA836154, AW274680, W39570, AW170172, AA689438, AA406308, AA535797, AI283454, N30079, AL119324, AL119457, AW392670, Z99396, AW372827, AL119363, AW384394, AL119319, AL042544, AW363220, AL119497, AL119391, AL119484, AL119522, U46351, AL119355, AL119496, AL119443, AL119418, AL119399, AL119341, AL119483, U46341, AL119396, U46349, U46350, U46347, AL037205, AL119335, AL119401, AL119439, AL119444, AL134531, AL134525, AL134536, U46346, AI142131, AL042614, AL042965, AL042984, AL134538, AL043019, AL042975, AL134902, AI142132, AL043029, U46345, AL039851, AL042542, AL042450, AL042551, AL043003, AL119464, AF126743, AR066494, AR060234, A81671, AB026436, AR054110, AR069079
1297	HUCOR05	875982	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 613 of SEQ ID NO:1297, b is an integer of</p>	AI888086, AI962990, AI983535, AI597764, W60854, AI368836, AI808836, R49083, D60229, AI039175, R69837, R69838, AI277306, AA489467, AI498566, H28639, AA165333, C14571, AA094632, AA918475, AL096773

1298	HWAIC77	875983	15 to 627, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1297, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 367 of SEQ ID NO:1298, b is an integer of 15 to 381, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1298, and where b is greater than or equal to a + 14.	
1299	HWMBG8 0	875984	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 495 of SEQ ID NO:1299, b is an integer of 15 to 509, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1299, and where b is greater than or equal to a + 14.	AI472111, AI288509, AA453203, AA454170
1300	HTXFU22	875989	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 438 of SEQ ID NO:1300, b is an integer of	AA226318, AI734064, AI732089

1301	HCQD049	875990	<p>15 to 452, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1300, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 525 of SEQ ID NO:1301, b is an integer of 15 to 539, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1301, and where b is greater than or equal to a + 14.</p>	AI491942	
1302	HDPOZ22	875991	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 418 of SEQ ID NO:1302, b is an integer of 15 to 432, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1302, and where b is greater than or equal to a + 14.</p>	Z43549, N39489, AC004789, AC005222	
1303	HWLQA90	875994	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 407 of SEQ ID NO:1303, b is an integer of</p>	AA486226, AI590941, AA157504, AC004503, AC005006, AC005962	

1304	HATBS19	875995	<p>15 to 421, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1303, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 801 of SEQ ID NO:1304, b is an integer of 15 to 815, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1304, and where b is greater than or equal to a + 14.</p>	<p>AA129774, N45232, AA478926, AW173347, AW390310, AI803946, AI471990, AI480219, AA928879, AA478806, AI802226, AI683194, AI356830, AI400467, AI421708, AW341836, AW136439, AI928546, AI937609, AI559183, AW316851, AI457809, AI420660, AA886493, AI915161, AW339403, D12201</p>
1305	HHSF111	875996	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 515 of SEQ ID NO:1305, b is an integer of 15 to 529, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1305, and where b is greater than or equal to a + 14.</p>	<p>AI017418, AI817785, AA455094, AC005799</p>
1306	HCYBA19	875998	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 907 of SEQ ID NO:1306, b is an integer of</p>	<p>AA308922, T84214, Z43709, R05654</p>

1307	HAPQW21	875999	15 to 921, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1306, and where b is greater than or equal to a + 14.  Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 788 of SEQ ID NO:1307, b is an integer of 15 to 802, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1307, and where b is greater than or equal to a + 14.	AI816929, AA743053, AA767907, AI494624, AA932213, AI830745, AA837394, AI962187, AI963297, AI962646, AI499897, AW207508, AA257988, AI889250, H62091, AI873713, AI652649, AI652588, AA412301, AA215370, AW245619, AI824020, AI208488, AI933125, AA912107, AI827787, AA470031, AW080557, AW367956, AA806884, AI611226
1308	HCERN16	876001	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 365 of SEQ ID NO:1308, b is an integer of 15 to 379, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1308, and where b is greater than or equal to a + 14.	R86881, AA344692
1309	HSPME68	876006	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1430 of SEQ ID NO:1309, b is an integer of	AI831502, AW135590, R80329, AI453275, H03544, AI867183, AA598849, H44114, AI864755, H92020, AA483703, H03459, AI973227, R28250, R80223, R27989, H92021, R93832, Z38639, AI807377, AW103726, AI343038, AW148303, AW302662, AI336506, AI254251, AW303238, AW268290, AI318301, AI363741, AI344795, AW411235,

1310	HCRMC21	876007	<p>15 to 1444, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1309, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 339 of SEQ ID NO:1310, b is an integer of 15 to 353, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1310, and where b is greater than or equal to a + 14.</p>	<p>AW148382, AW161098, AI206899, AW118417, AA644481, Y11254, A91160, A76335, AL122098, AR068753, AR068751</p>
1311	HLWCB78	876008	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 913 of SEQ ID NO:1311, b is an integer of 15 to 927, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1311, and where b is greater than or equal to a + 14.</p>	<p>H39742, R28582, AA384999, R58373</p>
1312	HWLME80	876011	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 490 of SEQ ID NO:1312, b is an integer of</p>	

1313	HKTAB46	876012	<p>15 to 504, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1312, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 850 of SEQ ID NO:1313, b is an integer of 15 to 864, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1313, and where b is greater than or equal to a + 14.</p>	<p>AI768516, AI082809, AI804454, AW173368, AA905101, AI080483, N38942, N29489, AI500550, AA994475, AI001079, AA707368, AA593145, AA569473, AW386118, N63226, AA614464, N46512, AW272021, AI828244, AL133605</p>
1314	H2CBJ20	876013	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 855 of SEQ ID NO:1314, b is an integer of 15 to 869, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1314, and where b is greater than or equal to a + 14.</p>	<p>W02575, AA304931, D58283, D80188, D51423, D57483, D59859, D80043, D80166, D80253, D81030, D59619, D80210, D51799, D80240, C14331, D80212, D80022, D80195, D80219, D80391, D59275, D50979, D59787, D80227, D59502, D80366, D59889, C14389, D80164, D80196, D59927, D59610, D80269, D80024, D80038, D59467, D80193, D50995, AA305409, C15076, D80378, C14429, D80241, C75259, T03269, D80045, D51060, C14014, AW178893, AW178775, D80134, D51022, AW179328, AW177440, D51250, AA305578, D81026, AW378532, D80268, AW352158, D80522, F13647, D80949, D80248, D52291, D80251, AW369651, D59695, D58253, D51079, D80168, AW178762, D81111, AA514188, AW177501, AW352117, AW177511, C14227, Z21582, D80133, AA514186, D80064, C14298, AW360811, AI905856, C14407, AW378540, AW377671, AW375405, AW360844, AW377672, AW366296, D80132, AW360817, AW375406, AW177505, AW378534, AW352171, AW179332,</p>



				AW179023, AW377676, AW178905, AW178754, AW179024, D51097, AA285331, D80439, AW360834, AW360841, AW352172, AI557751, AW179020, D80302, AW352170, AW178909, AW177456, AW178906, AW177731, D80247, AW178907, AW179019, AW179018, AW178971, AW179017, AW179004, AW179329, AW352174, AW179012, AW178980, AW177733, AW378528, AW178908, AW179220, T11417, D51759, D80157, AW179009, AW178914, AW378543, AW378525, D51103, D80014, AW367967, AW178983, T03116, AW352120, AW177728, AW178774, AW178781, AW178911, AW352163, D58246, AW378539, T48593, D58101, D59503, C06015, AI557774, D45260, D59627, D80258, AA809122, D50981, H67854, AI525917, T02974, AW378533, AW367950, AW178986, AI525923, C03092, AI525235, H67866, AW177734, D51213, C14957, D59474, AI525912, C14344, AA514184, D59317, D51221, Z30160, AW179013, D45273, C14973, AI525920, AI525227, AI535686, AI525242, T03048, AW178759, C14046, D59551, C16955, AI535961, H67858, AI525215, AW378542, AI525925, Z33452, AI525237, A62298, AJ132110, A84916, A62300, AR018138, AR008278, X67155, Y17188, D26022, A25909, A67220, D89785, A78862, D34614, D88547, AF058696, X82626, AB028859, AR025207, Y12724, AB012117, A82595, X68127, AR016808, A94995, A85396, AR066482, AB002449, A44171, AR008443, AR060385, A85477, I19525, A86792, U87250, X93549, I50126, I50132, I50128, I50133, AR066488, AR016514, AR060138, A45456, A26615, AR052274, Y09669, A43192, A43190, AR038669, AR066487, AR066490, A30438, I18367, D88507, I14842, AR054175, AF135125, AR008277, AR008281, D50010, Y17187, A63261, AR008408, AR062872, A70867, AR016691, AR016690, U46128, AB033111, D13509, I79511, A64136, A68321,

1315	HWBDR92	876018	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1818 of SEQ ID NO:1315, b is an integer of 15 to 1832, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1315, and where b is greater than or equal to a + 14.</p>	<p>AR060133, AR064240, U87247, AB023656, AF123263, X93535, AR008382</p> <p>AW024416, AW238938, AW361813, AI421202, AI434791, AI309982, AI769534, AI378930, AI393963, AI492647, AA953114, AI380180, AI769524, AI420285, AI805717, AI077552, AI678958, N26060, N40424, AI190662, AI613423, AA976041, AA581509, AA776498, AI268866, AI291641, AI289100, AA186514, AI208759, AA278467, AA665834, AI341899, AA315414, W07679, H23150, AI671697, AA315695, AI961637, AA989174, AI613432, AA235080, AI127470, AA603717, R80986, H09069, AI085843, AA993834, AA235209, AI160297, N80556, AA421270, AA187209, AI205566, AW277106, H59979, W39334, AA045407, T75129, AA503424, W52459, F10405, AA421317, AA723427, AW189559, W52458, AA045301, AA256210, AA503121, H09070, AI862840, AA921301, AI819232, AA303086, H81373, H23151, W15379, AI003129, H57853, H80453, AA587453, F12797, AA811971, AA379841, R80786, AA737085, AW029021, R38552, T48991, AA565741, AA503131, AA256353, F17470, AI424220, AI431521, T48990, AI381715, AL038986, R20931, AI424511, AW361749, AA835425, AI569722, AW337583, AA558437, AA373318, AW269615, D20475, AW016289, AW014562, AI795986, AI066579, AA057708, T25034, R54035, AA626100, AI801600, T84464, AA745560, AA745431, AA076616, AF151801, AL050215, AC004983, D89937, AC004967</p>
1316	HWMBI92	876019	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 642 of SEQ ID NO:1316, b is an integer of</p>	

1317	HWMFU50	876021	<p>15 to 656, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1316, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2506 of SEQ ID NO:1317, b is an integer of 15 to 2520, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1317, and where b is greater than or equal to a + 14.</p>	<p>AI110856, AA143745, AI693023, AA151633, AA761698, AL121337, AI298472, AI018193, AW372477, AA491188, AW131073, AA505133, AA599482, AI143548, AA430400, AA151685, AA825984, AW366355, AI383751, AA613495, AA252073, AI076636, H81681, H66674, AA779949, AA885895, AA298085, AI383750, W05653, AA148124, AI074739, AI687281, H11552, AW451697, AI150645, AA041459, AI208735, H81680, AA620485, AA112748, AA976412, H00961, T31804, AA357205, AA041512, AA678631, R67964, N76147, AI468649, H11443, H00962, AI383531, Z45863, AA360936, F04726, AW074481, AA872316, AI024087, AA309629, R66877, AI702342, AA653426, AA732728, AA252105, AA490992, AA770121, N87414, AA356722, AW027385, AI434752, R58494, AI275780, AA090352, AI370532, AW390733, AA879149, AI923615, Z21234, Z21233, AF090915</p> <p>AA715374, Z25205, AI202201</p>
1318	HCQCM19	876022	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 568 of SEQ ID NO:1318, b is an integer of 15 to 582, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1318, and where b is greater than or equal to a + 14.</p>	
1319	HBWCF70	876023	Preferably excluded from the	<p>AI219865, AW294721, AA431535, AW451194,</p>

1320	HCRON30	876024	<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1085 of SEQ ID NO:1319, b is an integer of 15 to 1099, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1319, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 708 of SEQ ID NO:1320, b is an integer of 15 to 722, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1320, and where b is greater than or equal to a + 14.</p>	<p>AA307304, AA917679, N72093, H19317, AA868722, AA313570, AW270831, AW242483, AA306705, AA584601, AA431211, M97501, X64838</p>
1321	HCNAK16	876025	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 241 of SEQ ID NO:1321, b is an integer of 15 to 255, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1321, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the</p>	AA327228
1322	HCQDG19	876026	Preferably excluded from the	AI635818, AC007630

			present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 232 of SEQ ID NO:1322, b is an integer of 15 to 246, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1322, and where b is greater than or equal to a + 14.	
1323	HCQADI6	876027	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 325 of SEQ ID NO:1323, b is an integer of 15 to 339, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1323, and where b is greater than or equal to a + 14.	AA252134
1324	HCQASI6	876028	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 352 of SEQ ID NO:1324, b is an integer of 15 to 366, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1324, and where b is greater than or equal to a + 14.	
1325	HGBBG01	876029	Preferably excluded from the	AA297618, AA188451, F06972, F06481, X83107,

			present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 417 of SEQ ID NO:1325, b is an integer of 15 to 431, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1325, and where b is greater than or equal to a + 14.	AF045459, AC003669, AF012104, U88091, U08341, AR042423, AR044115
1326	HILBF13	876030	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 410 of SEQ ID NO:1326, b is an integer of 15 to 424, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1326, and where b is greater than or equal to a + 14.	AA313226, AA352231, AA729004, H63236, AI174489, AA493814, AA847341, AA502774, AI884404, R95751, AA832104, AA126969, AA368329, N21434, AI567676, AI002863, AA991640, AA602715, AA368659, AI003620, AA219166, AA659011, AA420424, AA749196, AA309287, AI124558, AA143703, H79323, AI802268, AA831913, AA730795, AA598579, AA832108, AI791227, AA365628, AA196994, AA598605, AA595508, AI732911, N27340, N53783, AA455202, AI734193, AA482682, AA525156, AA218874, AA598497, AA643768, AW083966, AA351893, AA668421, AA581317, N55076, AI376687, AW069273, AA825954, AA229370, AI538404, M77964, AA315052, AI049999, AP000553, Z68756, AB023049, AP000512, AL079342, AC005305, AF075069, AD000092, AL008731, AC007993, AL008628, AL035587, AC005089, AC008372, AL133163, AC005913, U95742, AC007537, AL031721, AC009516, AL035420, AC003071, AC000052, AL133246, AF053356, AC005722, AB003151, AC006930, AP000099, AC000025, AC007193, AC006273, AC005527, AB023051, AC004099, AP000688, AP000036, AC005747, AC006511, AC004150, U78027, AL034553, AC003047, AC004997, AC004475, AC005519, AL009181, AP000046, AP000114.

			AL021393, AL049650, AC007687, AC005529, AC005406, AC003102, AC005585, X74984, AC005828, AC002369, AL022315, AC005907, U95739, AC004000, U91327, AF076450, AJ246003, AL035086, Z83826, AL109613, AL121655, D16583, AC005725, AL030995, AF196779, AC005535, AL020997, AL035400, AC004650, AL096712, U89337, AC008045, AP000344, AL117258, AC005099, AC007314, AC003098, AP000503, AL022326, AL020993, AC004668, AC004254, AC006581, AC005837, AC007277, AL021806, Z15025, AL049829, AC005932, AL049699, AL122023, AP000302, AL080243, AC005516, AD000833, AP000077, U91326, Z73417, AC002395, AL034379, AL132712, AC005859, Z95116, AF003528, AP000243, AL049643, AF134726, AP000098, AP000203, AC005412, AC002991, AL035445, AC005041, AC005971, AC004812, Z84474, AF217403, AC003046, AC005003, Z82198, AL008734, AC004531, AF205588, AC004756, AL034421, AC005776, AC004073, U93305, AC002310, U85195, Z98946, AF111169, AF196972, AL136168, U63721, AC005768, AC004678, AC005253, AC007001, AP000280, AC007207, AC005759, AL031708, AC002996, AC004131, AL031058, AL109801, AC005694, AC006121, L47234, AE000658, AC001551, AC006080, AC006057, AC004072, AL133321, AC004227, AC006006, AC007051, AP000555, AC007666, AC005755, AC005993, AP000107, AP000039, AC006950, AC004263, U51561, AC007390, AC005924, AC007014, AC007546, AC003109, U62317, Z98949, AB020867, AC004808, AC004465, AF129756, AC004682, AC004703 AA280322, AC006153
			Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by
1327	HCQD118	876034	

1328	HEMGFI0	876039	<p>the general formula of a-b, where a is any integer between 1 to 301 of SEQ ID NO:1327, b is an integer of 15 to 315, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1327, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1853 of SEQ ID NO:1328, b is an integer of 15 to 1867, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1328, and where b is greater than or equal to a + 14.</p>	<p>AL045532, AI672339, AI916546, AI674054, AA922064, AW022969, AI539447, AI338659, AI038295, AI809635, AI569951, AI015944, AA236487, AA917051, W72067, AI522144, AW340476, AW001031, AI042560, AW272351, AW291220, AA496094, AI808121, AA453459, AA216783, N90068, W38469, AA002033, AA482997, AA234484, F12296, T66274, Z24870, W76350, F09922, T95502, AI128578, T66187, T95501, Z28614, AA453960, R16316, T58251, T88786, AI272000, AA001829, AI654859, AI624582, AI334322, T58298, AI376307, U85995, U85994, AF095771, U87408, AF095770, U85997, AC006195, AF095769</p> <p>AA425162, AA454628</p>
1329	HCQDGI0	876044	<p>Present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 523 of SEQ ID NO:1329, b is an integer of 15 to 537, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1329, and where b is greater than or equal to a + 14.</p>	
1330	H2CBSI7	876045	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a</p>	<p>AA313483, AI092587, W07818, N79448, AA773593, R53234, R94785, R24805, H10024, AA229847, R94705, AA430523, AI435476, AW001866, AI565825,</p>



			<p>nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1337 of SEQ ID NO:1330, b is an integer of 15 to 1351, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1330, and where b is greater than or equal to a + 14.</p>	AA430508, N71537, A1760594, A1911011, A1732273, A1440283, A1131012, AA582791, A1038591, N52904, A114119, AA643763, A1561115, N78511, AA011130, A1668849, A1676028, A1371354, AA009702, N73670, AW369840, R53598, AA584483, AL044698, R48261, W63583, AA493983, AA968449, AC005332, AC004876, AC005771, AC004616, AP000038, AC005184, AL139165, AC004098, J03764, AF019664, AC004874, AL033525, AC009498, AP000280, AC005704, AL035427, AP000107, AC005060, AC005922, AL035633, AC007628, AC005011, AL078638, AF042484, AC007676, AC008071, AC007198, AC000120, AP000140, Z93931, AL031655, AP000088, AL031123, AC006996, Z75957, AL034555, AC004055, AC006354, AP000269, AP000103, AF001548, AF049895, AL132987, AL022068, AB013139, AL034425, AC002546, AF069291, AC004929, AC007262, AC002115, AL020989, AL031055, AL021877, AC004703, AC004664, AL021977, AC002480, AL035691, AL035072, AC004100, AC006370, AC006013, AP000033, AC005562, AC007312, AL031737, AC005406, AC005919, Z96074, U95743
1331	HETIT76	876048	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1217 of SEQ ID NO:1331, b is an integer of 15 to 1231, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1331, and where b is greater than or equal to a + 14.</p>	A1799695, A1343330, A1498160, A1885048, AW372347, AW372353, A1361693, AW372342, A1290222, AA833641, H23783, W73966, A1077502, AW242637, AA514487, AA975211, A1569053, W79847, A1869527, AA832078, N55405, AA126154, AA313196, A1560671, H49102, AW236097, A1742230, AA126132, H49333, A1732692, AW172617, AA199707, A1280378, W79860, W74521, AA279226, A1650312, AC005352, AL117338, AF088062
1332	HMVBD68	876052	<p>Preferably excluded from the</p>	AW083378, AA057509, A1679190, AA574451,

<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1266 of SEQ ID NO:1332, b is an integer of 15 to 1280, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1332, and where b is greater than or equal to a + 14.</p>	<p>AA599718, AA054285, AA706513, AI707934, AW023524, AA199863, R66161, AA862725, R84843, R85715, H86142, AL038837, H86028, AL039074, AL039564, AL039108, AL039156, AL039085, AL039659, AL039625, AL039648, AL039678, AL039150, AA059178, AL037051, AL036725, AL039629, H00069, AL039109, AL038531, AL039128, AL040992, AL045337, AL037726, AL042909, AL039423, AA013394, AL039410, AL134524, AL039538, AL044530, AL045353, AL036973, AL044407, AL038821, AL039386, AL036418, AL039924, AL037526, AL043441, AL043445, AL037082, AL036196, AL037639, AL039566, H39007, Z99396, AL043422, AL039509, T24119, AL038851, T24112, AL038025, AL045341, AL036767, AI535983, T23947, D51250, AL036117, AL045794, AW013814, AL043423, AL036924, AL037615, AW452756, AL036190, AW451070, AL036238, AL037085, AI142134, AL036679, AI535783, AL036733, T23659, AL038983, AL036858, AL134110, AL038447, AL037021, R47228, AL036998, AL045328, D80253, AL037727, AL037054, AL036191, AL036964, H00072, AL045327, AL047163, AL042898, AL036268, T02921, D59275, AL036765, AL037077, AA631969, AL039643, AL039432, AL119483, AL049018, T48598, D80219, AL038838, D59787, AL037343, AL037295, AL044125, AL037436, AA514190, AL037178, AL037335, AL037323, AW080777, AL119484, AL041347, AL037027, AW022897, AL038651, AI547295, AL036999, AW450376, AL038761, AL037443, AI348766, AL038532, Z25783, AL036719, AW103927, AL037094, T11051, AL042850, AA478355, AI700109, AL038822, AI267269, AL037435, AA548890, AA702729, AI334443, AL040193, AA191659, AA410788, AL119324, AA577824, AA630672, AA526787, AI056177, D29033, T28100, AA493975,</p>
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	AA579179, AI223604, AL040061, AL044162, AL047012, AA483929, Z25782, AA834707, AW148507, AA456578, AL046549, T07039, H66681, AI254913, AL041238, AL043496, AL043923, X95073, AF118808, D14548, AR066494, AR017907, Z96142, AR038286, X68127, I92483, AR062871, I03665, I03664, A15078, E00523, A67220, X73004, A95051, A58522, AR036905, A92133, A97211, A58521, A02712, A85477, A85396, AJ244003, AJ244004, AR062872, AJ244005, I06859, AR062873, A18050, A84772, A35536, A35537, A23334, A75888, I70384, I18371, A20702, A60111, A23633, AR043601, AR025207, AR007512, A18053, A84776, A84773, A84775, A02135, A02136, A04663, A04664, A84774, A43189, I66495, AR031374, A43188, AR067731, A38214, A49700, AR031375, A20700, I66494, A64081, AR008430, AR067732, A44171, I56772, I95540, AR018924, I60241, I60242, A51047, A63064, AR018923, A48774, A98767, A63072, A48775, AR068507, I66498, I66497, I66496, AR068506, I00074, I66486, I66487, I19516, A58524, AR015960, A91750, AR064707, A93963, A93964, AR000007, AR015961, I63120, A95052, AR020969, A25909, AR043602, AR043603, A95117, A58523, A23998, AF156296, AR037157, A11245, V00745, A02710, E12615, AR035193, A86792, E13740, AR054109, A07700, AR000006, A13392, A13393, AR036903, D28584, U87250, AR027100, I03343, I28266, AF156294, A82653, AR022240, Y11923, A81878, I21869, I13349, A24783, A24782, E14304, AJ230933, A70040, E16636, I19517, I01992, A27396, D88984, A76773, A22413, I08051, Y11926, A49045, A93016, E16678, I25027, I26929, I44515, I26928, I26930, I26927, A58525, I25041, I68636, E03165, E16590, I00077, S70644, I49890, AF096810, AF156303, AR064706, I44516, AF019720,

1333	HWLQD17	876056	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 114 of SEQ ID NO:1333, b is an integer of 15 to 128, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1333, and where b is greater than or equal to a + 14.</p>	<p>A60957, Y11449, A51384, X58217, AR038762, A92636, I84553, A91754, I84554, E02221, E01614, E13364, I00079, A60968, A18722, AF156304, D34614, A58526, A91753, AR023813, AB012117, A10361, AR035975, AR035977, AR035978, AR035974, AR035976, AF130655, AR066482, M32676, A60985, A60990, Z79475, A60987, Y17188, AC004935, X15418, S65373, AC004111, AJ238010, AC002431, AC004851, AC010722, AC006582, AC004797, AC005373, AP000512, AL121603, AL049430, AC005291, AC007191, U50871, AC004213, AL049631, AC002059, AC002480, U95739, AP000132, AP000210, U91318, AC005332, AL034395, AL031281, AC009784, AP001172, Z95116, E04616, AL035413, M21251, AC006999, AC006211, AC004466, AL080317, AC002395, AC005914, AC000026</p>
1334	HCRME16	876057	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 424 of SEQ ID NO:1334, b is an integer of 15 to 438, where both a and b</p>	<p>AA826803</p>

1335	HCQC116	876059	<p>correspond to the positions of nucleotide residues shown in SEQ ID NO:1334, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 336 of SEQ ID NO:1335, b is an integer of 15 to 350, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1335, and where b is greater than or equal to a + 14.</p>		
1336	HKLAB15	876062	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 476 of SEQ ID NO:1336, b is an integer of 15 to 490, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1336, and where b is greater than or equal to a + 14.</p>	T70859, AI991425, T96900, AL137658, AC005343	
1337	HCYBH57	876065	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 734 of SEQ ID NO:1337, b is an integer of 15 to 748, where both a and b</p>	AA306889, AA305320, AA508639, N49791, H90350, AW016011, AW377205	

1338	HCQDM08	876070	<p>correspond to the positions of nucleotide residues shown in SEQ ID NO:1337, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 98 of SEQ ID NO:1338, b is an integer of 15 to 112, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1338, and where b is greater than or equal to a + 14.</p>	<p>AW384125, AA496504, AI610340, AA248671, AA130789, AA180915, AA478370, AI733781, Z98485, AI796704, AL044742, AL048069, AA626025, AL048572, AL047765, AL039283, AI557485, AL048501, AI546967, AI546957, AA516161, AI924321, AA887171, AI132973, AA420684, AI133122, AA654779, AA654118, AA194612, AA532618, AI132978, AI133640, AI114783, AI064749, AI064986, AI133242, AI065142, AI133340, AI114709, AI110634, AI065125, AI065095, AI133581, AI133663, AI110590, AI133479, AI065101, AI114457, AI133604, AI207634, AI525970, AI133582, AI114582, AI174912, AI114665, AI133512, AA081070, AA578984, AI557069, C17847, AI174878, C18490, AI133723, AI133615, AI133526, AA089877, AI525469, AA225945, AI114594, AI557701, AA112129, AA213849, AA410915, AA195856, AA182920, AI165635, AI208489, AA662114, AA244064, AA088806, AA228826, AA652493, AA622823, AI979027, AL049144, AA225205, AI244851, AI827423, AA132431, AA410765, AA176509, AA089690, AA828070, AA640731, AA641599, AI749067, AA569303, AA502464, AW385506, AA663702, AA229378, AA876457, AA467990, AA084304, AA229146, AA837558, AW371147, C18623, AA583353, AA188095, AA641178, AA293576, AA082601, AW375786, AA468053, AA092886, AA427549, AA129770, AA480482, AA658436, AA502853, AA394267, AA640898, AI132974, AA193149, AA091406, AI749996, AA095793, AA226058, AI535866, AI940772,</p>
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1339	HSSEA17	876078	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 608 of SEQ ID NO:1339, b is an integer of 15 to 622, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1339, and where b is greater than or equal to a + 14.</p>	<p>AA527220, AA194743, AA399036, AA091372, AA192775, AA089626, AI525481, AI524836, C14151, H41888, Z56605, X76676, AR028448, X62996, D38112, V00662, J01415, X93334, Z59182, D38114, D38113, X93335, D38116, Z58833</p> <p>Z56928, Z56929, Z64722, Z54751</p>
1340	HCQDG14	876079	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 610 of SEQ ID NO:1340, b is an integer of 15 to 624, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1340, and where b is greater than or equal to a + 14.</p>	<p>AW235671, AI740682, AA770521, AA428282, AI522043, AI276457, AI984187, AI382430, D79844, D62692, AA741145</p>
1341	HCQAQ14	876081	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 948 of SEQ ID NO:1341, b is an integer of</p>	<p>N52898, N40697, AI221215, AI961502, N27935, AI538394, AW366714, AA557734, AI916398</p>

1342	HCQBN16	876082	<p>15 to 962, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1341, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 248 of SEQ ID NO:1342, b is an integer of 15 to 262, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1342, and where b is greater than or equal to a + 14.</p>	
1343	HWLQE13	876086	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 819 of SEQ ID NO:1343, b is an integer of 15 to 833, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1343, and where b is greater than or equal to a + 14.</p> <p>AA284114, AA878237, AI440478, AI183980, AI830413, AI693370, AW167651, AI284239, AI087052, AA025164, AI075952, AI276058, AA781007, AI333050, N69861, N99037, W47304, AA626017, W47171, AI672591, AA885176, AA644449, AI222118, AI080182, AA055097, AI350932, AA526741, AA524562, AA719566, AA055070, AA397901, AA890555</p>	
1344	HWMB01	876088	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 432 of SEQ ID NO:1344, b is an integer of</p> <p>AI023441, AI242040, AA847082, T50456, AA331171, AA650226</p>	



1345	HKLAA70	876089	<p>15 to 446, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1344, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 352 of SEQ ID NO:1345, b is an integer of 15 to 366, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1345, and where b is greater than or equal to a + 14.</p>	AA259061, Z56085	
1346	HWLCK07	876090	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 412 of SEQ ID NO:1346, b is an integer of 15 to 426, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1346, and where b is greater than or equal to a + 14.</p>	AW083180, AI817883, AW138123, AI832211, AF009961, AF127026, AF105424	
1347	HISAV29	876091	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 553 of SEQ ID NO:1347, b is an integer of</p>	R98881, Z93242, AF160728	

1348	HWLXE78	876093	15 to 567, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1347, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 568 of SEQ ID NO:1348, b is an integer of 15 to 582, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1348, and where b is greater than or equal to a + 14.	AA196426, AI796138, AA308423, AI818489
1349	HSLHI12	876094	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 265 of SEQ ID NO:1349, b is an integer of 15 to 279, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1349, and where b is greater than or equal to a + 14.	
1350	HCQCX03	876095	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 513 of SEQ ID NO:1350, b is an integer of	W89052, AL133355

1351	HCQCR12	876097	<p>15 to 527, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1350, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 622 of SEQ ID NO:1351, b is an integer of 15 to 636, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1351, and where b is greater than or equal to a + 14.</p>	<p>D80188, C14389, D59275, D50979, D80043, D58283, D80391, D59787, D80196, D80227, D80522, D51022, D59859, D80022, C14331, D80166, D80195, D50995, D59467, D51423, D59619, D80210, D51799, D80164, D80240, D80253, D59502, D59927, AA305409, D80269, D81030, D80247, D81026, D80248, D80212, D80366, D80219, AA305578, C15076, D57483, D80038, D59610, C14014, D51060, D59889, D80439, D80193, D80133, D80045, D80024, D80268, AW360811, D80378, AA514186, AA514188, AW177440, D80302, D80251, D80241, T03269, C14429, AW178893, AW377671, AW375405, D51103, AW177731, D80157, AW178983, AW178906, D51759, AW366296, AW179328, AW360844, AW360817, AW179020, C75259, AW375406, T48593, AW378534, AW179332, AW377672, AW179023, AW178905, AW378532, AW178908, AW177501, AW177511, C05695, D59373, AW179024, AW352171, AW179004, AW377676, AW378528, AW352170, AW178907, D80132, AW178762, AW179019, AW360834, C06015, AW177505, D80134, AW176467, D51250, AW360841, D58253, AW367967, AW178775, AW369651, D59653, AW178909, AW177456, AW179329, AW179009, AW178980, AW178914, AW178911, AW177733, AW178754, AW179018, AW352158, D51079, AA809122, D80014, AW352117, D45260, AW367950, AW178774, AW352120, F13647, AW378525, AW179012, H67854, AW177722, AW352163, T11417, C03092, D52291, H67866, AW378543, D59627, AW177728, D80168, D81111, AW177723, AW378540, D51213, AI525923, AI910186, AW178986, C14227, C14973, AW178781, AI905856, C14298, AI535850, T03116,</p>
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1352	HPJBW76	876098	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 540 of SEQ ID NO:1352, b is an integer of 15 to 554, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	<p>N50949, AA329541, AL120708, AI922673, D63195, H05929, AI679480, AA808536, F03253, T80197, AA125781, AC010169, AC002300, AC004526, AC003010, AC005183, AC007993, AC005258, AC005057, AC002425, AC004878, AP000501, AC005871, AL133163, AC005844, AC005363, AC008149, H82274, AA665465</p>

1353	HCQCD81	876101	<p>NO:1352, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 669 of SEQ ID NO:1353, b is an integer of 15 to 683, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1353, and where b is greater than or equal to a + 14.</p>	<p>AA019633, AI290219, AA020897, AI278259, R37194, AA021465, AA018170, AA018313, AA019821, T05511, AI335614</p>
1354	HCYBF60	876104	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 420 of SEQ ID NO:1354, b is an integer of 15 to 434, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1354, and where b is greater than or equal to a + 14.</p>	<p>R92525, AA205785, AA173507, AW239243, AA305229, AA305174</p>
1355	HCQCD09	876105	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 419 of SEQ ID NO:1355, b is an integer of 15 to 433, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	<p>AA594230</p>

1356	HWLVY67	876107	<p>NO:1355, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 618 of SEQ ID NO:1356, b is an integer of 15 to 632, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1356, and where b is greater than or equal to a + 14.</p>	<p>AI088192, AI9923372, AI992373, AA768994</p>
1357	HMAKC34	876108	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 954 of SEQ ID NO:1357, b is an integer of 15 to 968, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1357, and where b is greater than or equal to a + 14.</p>	<p>AA706348, AI742004, AA612742, AA418899, AA622550, AI688045, W04608, AA639641, N73891, AI306136, C75175, N54079, AA037389, U40583, X70297, AF036903, AF037646, AR055255, U62436, Z23141, L25827, AF087689, Y08420, X93604, AJ245976</p>
1358	HNGBJ13	876109	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 704 of SEQ ID NO:1358, b is an integer of 15 to 718, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	

1359	HCFP28	876117	NO:1358, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1614 of SEQ ID NO:1359, b is an integer of 15 to 1628, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1359, and where b is greater than or equal to a + 14.	W38691, AW170228, AW204712, AI342478, AA214559, AI301837, AI038938, AA041552, AA975363, AW207768, AI280415, AW241161, AI698575, AA213418, AI192391, AL042921, AL042806
1360	HCRH40	876118	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1283 of SEQ ID NO:1360, b is an integer of 15 to 1297, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1360, and where b is greater than or equal to a + 14.	AW340002, AW263252, AI302813, AA806234, AW337920, AI800828, AI685453, AA582942, AW150706, AI566501, AI802925, AI022951, N32077, AA743819, AI160053, AI336188, AA643850, AI091958, AW081284, AA512938, AI687081, AW051587, AA84985, AI738521, AA812286, AI185199, AI761431, AA403009, AA047094, AW130755, AI554205, W60982, AW069431, AA143405, AI086947, AI952635, AA862513, AW025157, AI674916, AI911657, AA457705, AW418700, AW009464, AI684131, AI811699, AI613185, AA043722, AA101008, AI812095, AA143404, AI695151, AA662383, W52268, AA034911, AI445209, AA410666, AI306627, AA152449, AI446572, AI760791, AI093619, AI955408, AI344379, AI739460, AI824906, AW002682, N29782, W52269, AA622005, AA586560, AI798484, W47540, W47587, AI795838, AA861143, AA524329, AA047184, AA506568, AW198106, AA936419, AW021602, AA506574, W45220, T49532, AI357909, AW168465, N25070, AA152448, AA907471, AA301628, AA641358, AA515290, W39753, N45391, H80074, AA431547,

1361	HKAAK32	876121	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2690 of SEQ ID NO:1361, b is an integer of 15 to 2704, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1361, and where b is greater than or equal to a + 14.</p>	<p>AI934135, AA927158, AA587966, AA372266, N25911, AA535141, AI918662, AW021800, AA613551, AA913677, F35471, AA102493, AI795855, AI718365, AA613011, AA480815, AA903677, AI872650, T49531, H80073, AA973783, AW375945, AA505724, AA514710, AI927674, AI475421, N57203, F24647, AA356940, AI936211, AA043424, AW367127, AA034978, AA593644, AI472573, AW374518, T10460, AA587154, AA431094, AI810621, AA918275, AI336721, AI709355, AI313344, AW004782, AA062797, AA632243, AW059882, N34155, AI557285, Y14551, AP000512, AB023051, AC006165, S81914, AF071596, AF039067, X96438, AF083421, AJ227914, Y16736</p> <p>AA576961, AI795908, AL120038, AW071648, AI923078, AI650566, N27861, AA020770, AI693672, AI828327, AW408804, AI423373, AW275975, AI656898, AA307019, AL121002, AI359865, AA088194, N73008, AI926866, AI079417, N35619, AI955093, AA258396, AI589460, AA856996, N21585, AI679493, AI824968, AI813785, N40634, AA857168, AI203273, AI079737, AW382798, AA332511, AA806210, AI913138, AI675042, AI868760, AA641278, AI371462, AA995175, H92531, AA113084, R66601, D79238, AW151392, D12298, D56582, AA380178, AW391828, AI352031, Z21892, AI940086, Z50194, U92983, U44088</p> <p>W07169, AA838748, AI985511, N78574, AI200281, AI658709, AW016259</p>
1362	HCQDQ31	876123	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 896 of SEQ ID NO:1362, b is an integer of 15 to 910, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	



1363	HHEEN22	876126	<p>NO:1362, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1809 of SEQ ID NO:1363, b is an integer of 15 to 1823, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1363, and where b is greater than or equal to a + 14.</p>	<p>AI361002, AI969720, AI805386, C06251, AI304680, AI885442, AI869317, AI306681, AI634959, AA653629, AI336898, AW192256, AW236693, AI870517, H10595, R52073, R73296, AI798507, AA464725, AI927008, M78003, AA479858, AA463941, R74154, AI582506, AA987791, AI094500, AA477492, AA464077, AA340304, AA781562, AA433963, R45811, AI361797, AI805569, AI685621, AI669742, N58164, F33325, AI889215, AA297873, AI304641, AL045494, AL042523, AL045327, AL135012, AL134110, AL134524, AL042420, AL042468, AL045328, AL042519, AL042741, AL042655, U46344, AL047163, AL045891, AL045326, AL042898, AL043089, AL043321, AL046356, AL042488, A85203, AR066494, AL122101, AL133053, AL133074, AL133049</p>
1364	HRABR73	876127	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 423 of SEQ ID NO:1364, b is an integer of 15 to 437, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1364, and where b is greater than or equal to a + 14.</p>	<p>AL039087, AL037259, AL041296, AL041098, AL043440, AL040464, AL041358, AL041324, AL041096, AL047012, AL043538, AL044162, AL045725, AL040576, AL041197, AL043612, AL039915, AL040553, AL041131, AL039432, AL047219, AL047057, AL047170, AL040119, AL047036, AL041292, AL041051, AL047183, AL040322, AL046330, AL041238, AL040529, AL041142, AL045817, AL040625, AL040510, AL043467, AL044186, AL040253, AL044037, AL040091, AL040128, AL040168, AL040255, AL040285, AL040342, AL040332, AL040617, AL045684, AL040745, AL049069, AL041346, AL043677, AL046442, AL045857, AL040839, AL041752, AL038822, AL043775, AL044165, AL041133, AL043492, AL041602, AL045920, AL038838, AL045753, AL041227, AL044074, AL043537, AL041635, AL045990, AL040458, AL044199, AL044187, AL046150, AL040090,</p>

	AL040263, AL040294, AL040329, AL044274, AL040082, AL044272, AL040148, AL040472, AL041730, AL041523, AL043627, AL049018, AL046392, AL040463, AL041374, AL040052, AL043845, AL042135, AL044064, AL038983, AL039316, AL043923, AL043814, AL045671, AL043848, AL041459, AL043570, AL041577, AL044201, AL044258, AL046850, AL046147, AL038532, AL040768, AL037727, AL041140, AL046327, AL046994, AL042712, AL040414, AL040571, AL046097, AL043496, AL046914, AI142134, AL040621, AL041186, AL039744, AL041086, AL042096, AL040444, AL080031, AL041955, AL041168, AL041159, AL041233, AL041246, AL079878, AL041277, AL041163, AL040193, AL040370, AL041278, AL037436, AL045994, AL040155, AL045784, AL040149, AL039360, AL037435, AL038761, AL045989, AL040075, AL039338, AL037443, AL079852, AL037335, AL046099, AL037295, AL047131, AL040238, AL037341, AI546855, T23985, Z30131, AI547039, AL045211, AL045340, AI546899, AI541509, AA585439, AL041347, AL043444, T23957, AI541510, AI541317, AI525306, T23888, AI541365, AI540967, AI525556, AI547006, AI541514, AI525431, AI541374, AI541534, AI535639, AI546999, AA585453, AI525321, AI557787, AI526194, AI541506, AI535813, AI546891, AI541017, T24112, T02921, T24119, AL039156, AL044530, AL036630, AL039504, AW451416, AW013814, AL039555, AL039509, AL039564, AL039538, AL038043, AL039108, AL039678, AL039566, AL039074, AL038837, AL039521, AL039625, AL039648, AL039659, AL039629, AL045794, AL039476, AL043586, AL037726, AL038531, AL039109, AL040992, AL039924,

	AL039128, AL044407, AL036973, AL042909, AL045341, AL045337, AL044412, AL037051, AL045353, AL039386, AL039423, AL039410, AL044364, AR067731, AR067732, AR051651, I25027, I26929, I44515, I26928, I26930, I26927, A29109, A32111, I44516, AR027100, A49045, AR009152, AR009151, AR067734, A83151, AR068508, AR068510, AR068509, I58322, I58323, I85513, AR054109, Z96177, AR068550, A23373, AR068551, X85060, E01324, I08638, A70359, AR016495, A95117, A93936, A94048, A94061, A94046, A94054, I07209, I07249, AR067733, AR029418, A63954, I09267, I09270, I09268, I09269, A49701, I09252, I09251, AR029417, AR035224, I58669, AR038066, AR027099, A27169, A27170, A39929, AR038307, AR038321, AR051652, AR038306, AR038320, I91969, A83642, A83643, X89399, I25041, AR018924, A48774, A48775, A38214, A44171, I56772, I95540, A63067, E01239, E01561, A51047, A63064, A63072, AR068507, AR068506, AR064436, AR000006, AR015960, AR000007, AR015961, A92081, AR027319, A91752, A91751, AR027318, A92080, A92077, A92078, A92079, AR031374, A49700, AR031375, A58521, AR020969, E01619, I06159, A93445, AR003585, A06633, A60212, A60209, A60210, A60211, A32110, A83180, A60206, A93446, A91754, A64973, A84772, A84776, A84773, A84775, A84774, AR037157, A86792, A58522, A68112, A68104, A91750, A11245, A20702, AR062871, A43189, A43188, A20700, A98420, A98423, A98432, A98436, A98417, A98427, I66495, I66494, I66498, I66497, I66496, I66487, I66486, X83865, A85395, A85476, AJ244004, I15353, E12566, E12564, E12565, A98767, A93963, A93964, E14304, AR062872, A81878, AR062873, A25909, AF082186, AJ244003, A58524, E16678, A58523, D78345, AR038762,

1365	HWMBX6 8	876137	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 509 of SEQ ID NO:1365, b is an integer of 15 to 523, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1365, and where b is greater than or equal to a + 14.</p>	<p>E03627, Y16359, AR055048, AR055051, AR055049, I66488, I66489, I66490, I66491, I66492, I66493, A91965, I66481, I66482, I66485, I66483, I66484, AR012640, I15718, I15717, A92133, I08395, M28262, I08396, A70040, A93016, I00682, A20699, A11623, E00609, A11624, I18302, E00696, E00697, E13740, A11178, E01007, I13349, E03813, A10361, AR035975, AR035977, I48927, I60241, I60242, I03331, A02712, A02710, E12615, AR035193, A77094, A77095, A07700, A13392, A13393, I62368, AR031488, I13521, I52048, A27396, I63120, AR017907, AR043601, A95051, A18053, I49890, I44531, I28266, A18050, A23334, A75888, I70384, A60111, A23633, I21869, AR007512, A24783</p>
1366	HE8OF49	876139	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2141 of SEQ ID NO:1366, b is an integer of 15 to 2155, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	<p>AI809519, AI733273, AI700619, AW444492, AI701407, AI268747, AW023153, AA933010, AI216153, AW450105, AI268633, AI793298, F03428, H09383, H09323, Z44285, AW297395, F04852</p>

1367	HWLHY12	876140	NO:1366, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1710 of SEQ ID NO:1367, b is an integer of 15 to 1724, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1367, and where b is greater than or equal to a + 14.	AW394038, AW157294, AW394036, AW163057, AA306435, AW362974, AW157089, AW362965, AI878985, AW162479, AA146857, AW362967, AA311937, AW362962, AA306611, AI879487, AW362949, AA774684, AA813993, AW362950, AW403413, AW362951, AW407973, H59390, AW362956, AA310305, AA360185, AA332342, AA120901, D81998, W21240, R18124, AA312498, AA971457, AI223218, AA377328, AA300637, AW163350, AA248513, AA377822, AW366952, AI690275, N91094, AL021808
1368	HCQBL07	876141	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 359 of SEQ ID NO:1368, b is an integer of 15 to 373, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1368, and where b is greater than or equal to a + 14.	AA668479
1369	H2LAJ32	876142	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 807 of SEQ ID NO:1369, b is an integer of 15 to 821, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID	AA313981, AA513970, D80022, D59787, D59927, D59502, D50995, D80391, D81030, D80188, D80166, D58283, D80212, D80196, D59619, D80210, D80240, D59859, D80195, D80193, D51423, D51799, C14389, D59275, D80253, D80043, D80227, D80219, D80164, D57483, D80269, D80366, D80038, D50979, D59889, C14331, T03269, C15076, D59610, D80378, D80024, D59467, D80045, C14429, AW178893, D80241, AA305409, D51060, C75259, C14014, D51250, D80134, AW179328, AW178775, AW352158, AW378532,

NO:1369, and where b is greater than or equal to a + 14.	<p>AW177440, D81026, F13647, D51022, AW369651, D80268, D80522, AA305578, Z21582, AW178762, D80168, D80949, C14227, D58253, AI910186, AI905856, D80251, AW177501, AW177511, D81111, D80248, AW360811, AA514188, AW378540, AW352117, D80064, AW176467, AW375405, D80133, AA285331, AW377671, AA514186, C14298, D51097, AW366296, AW360844, AW360817, AW375406, C14407, AW378534, AW360834, AW179332, AW377672, AW179023, AW178905, C05695, AW179024, AW178906, AW179020, AW352170, AW177456, AW352171, D80132, AW377676, AW177731, AW179220, AW178907, AW178754, AW179019, AW177505, AW360841, AW178909, AW179004, AW179329, AW179012, AW178980, AW177733, AW378528, AW179007, AW178908, AW179018, AW178971, AW177714, D80439, D80302, AI557751, D80247, AW352174, AW178914, AW378525, AW177722, AW367967, AW178983, AW177728, AW352120, AW179009, AW178774, AW178781, AW178911, AW378543, AW352163, D51103, T11417, D80157, D80014, T48593, D51759, T03116, D59627, AW177723, D59503, D58246, D80258, AI557774, C06015, AW378539, D58101, AW378533, AW367950, AW178986, D59653, AW177508, AI535850, T02974, D45260, C03092, AW177497, C14975, D51213, AW177734, H67854, H67866, AA809122, AI525923, D59474, AI525917, D59317, C14973, D45273, C14344, D51221, AW179013, AW178759, D59551, AI525920, D60010, AA514184, AI535686, AW378542, T03048, AA033512, D60214, AI525227, C14046, C04682, AW360855, AI525235, C05763, AI525925, AW378520, AI525242, AI525912, AI525215, AI535961, C16955, AC007695, A84916, A62300, A62298, AJ132110, D26022, A25909, Y17188, X67155, AR018138, A67220, D89785, A78862, D34614, D88547, X82626, AF058696, AR025207,</p>
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1370	HSIAD07	876146	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 409 of SEQ ID NO:1370, b is an integer of 15 to 423, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1370, and where b is greater than or equal to a + 14.</p>	<p>AR008278, AB028859, Y12724, AB010386, AB012117, X68127, A85396, AR066482, A44171, A85477, A94995, I19525, A86792, U87250, AB002449, X93549, A82595, AR008443, AR060385, I50133, I50126, I50132, I50128, AR066488, AR060138, AR016514, A45456, A26615, AR052274, A43192, A43190, AR038669, Y09669, AR066490, AR066487, AF135125, I18367, A30438, Y17187, D88507, D50010, A63261, I14842, AR008408, AR054175, AR062872, A70867, AB033111, AR016691, AR016690, U46128, A64136, A68321, AR008277, AR008281, D13509, AR064240, AR060133, X64588, U87247, I79511, AB023656, U79457, AF123263, AR032065, AJ000347, X93535, AR008382 AA376851, AF067844</p>
1371	HWLNZ56	876151	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 639 of SEQ ID NO:1371, b is an integer of 15 to 653, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	<p>AI636631, AA309020, AI744144, AW009754, AI700328, AI673552, T55187, T16814, R87983, AA514537, AW014851, R89617, AI202634, AA652368, AI695471, T04994, D50992, T18597, AI535639, Z32887, D59751, AI525556, AI535660, Z33559, AI557084, AI557262, AI536138, AI525500, AI557864, AI541205, AI557082, AI557533, AI526078, AI540903, C14228, AI525316, H65400, AI525302, AI525757, N71206, AI557317, AI541356, AI557312, AI525852, AI541075, AI557809,</p>

1372	HLQBA23	876152	<p>NO:1371, and where b is greater than or equal to a + 14.</p>	<p>AI557731, AI541365, AI525661, R29657, AI541353, AI525856, AI541321, AI557155, AI557238, AI525666, AI541450, AI541034, AI557258, AI557474, AI547196, AI525568, AI557602, AI540974, AI557041, AI535828, AI536150, AI535813, AI546829, D30843, AI557039, AI557154, AI525656, AI547177, AI557543, AF117946, A62300, A62298, AR050070, A82595, A82593, U94592, Z30183, AF006072, U41654, AR025466</p> <p>AA777628, AW085142, AA748330, AA811973, R89234, AA730279, R89233</p>
1373	HDPQV66	876153	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 893 of SEQ ID NO:1372, b is an integer of 15 to 907, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1372, and where b is greater than or equal to a + 14.</p>	<p>AW188509, AA133311, AA748711, AW006796, AA808751, AI636357, AI125533, AI125369, AI298453, AW166241, AA830092, AA033555, AI765118, AI096536, AI362676, AW303885, AI810267, AI304494, AW369295, AW369278, AI278826, C06204, AI298997, AA934415, AI803059, W45399, AA911937, AI285295, AW369353, H20014, AA846303, AA620334, AI380981, AA046599, H20084, AA856630, H41028, W32278, AA259115, AA348014, W57679, H41029, AI862059, AA436105, AW378921, H23401, W40332, AW370532, AI283494, H23290, AA838806, AA348015, R22761, AI702112, AA737279, AA736690, R22707, AA731236, R22706, R43410, AA133178, R43411, N49145, R23256, AA932492, AW002378, R23332, AA046727, AA976863, AA248262,</p>



1374	HODEJ02	876155	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2638 of SEQ ID NO:1374, b is an integer of 15 to 2652, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1374, and where b is greater than or equal to a + 14.</p>	<p>AW151330, N54032, AI784141, AA604954  AI936171, AI660616, AA723024, AA190582, AA702472, AA947752, AI814600, AA075189, AW020121, AW294648, AA757206, AI125830, AI696932, AI921488, W15540, AA167043, AA305635, AA830086, AI658993, AI436142, AA962072, AA284969, AA425011, AA250752, AA828460, D56246, AI741195, AA251400, AA829606, AI032702, AW079530, N49067, AA749129, AA279652, AA495947, AI026876, W31634, AI282893, AW079538, AA459370, AI074276, H89116, AA502299, D56326, AA284995, W32623, AA904260, AI001813, H89222, D56456, AW242319, AA250829, AI040832, AA837963, AW295502, AA442409, AA253372, AA279862, W03753, AW452047, AI289978, AA327787, AA634468, AA298940, AA459595, AA991736, AI090474, AA603227, AA730869, AI191872, D61332, AA634018, N86750, N79236, AI280656, AA211438, AA908725, AI695184, D62649, AA358933, N75598, AA811697, AI094362, F35399, N50196, AA075188, AW205837, AA773229, AF100156, AW364866, AC003042  AW360816</p>
1375	HWMBZ31	876156	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 313 of SEQ ID NO:1375, b is an integer of 15 to 327, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1375, and where b is greater than or equal to a + 14.</p>	
1376	HLTCX04	876166	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a</p>	<p>AA485808, AA505129, AI149019, AI970131, AI829798, AA346059, AA367024, AA371138, W39118, AA491324, AI817772, AA300274, AW194921,</p>

		<p>nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1239 of SEQ ID NO:1376, b is an integer of 15 to 1253, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1376, and where b is greater than or equal to a + 14.</p>	<p>AW166155, AI652296, AA824496, AI301046, AI249946, AL040694, AI241223, AI915295, AI250646, AA088789, AI471429, AW021717, AL036509, AL039011, AI500061, AI702527, AW059828, AW196720, AW163834, AA928539, AI538885, AL036705, AI969655, AI223980, AI434731, R53741, AI524654, AI401697, AA837391, AI799313, AI687568, AI623941, AI752007, AI580027, AI333104, AI274759, AL079740, AI345415, AL046849, AI682958, AA057840, AI374827, AI250353, AI586931, AI432644, AI805688, AI583578, AW088560, AA805708, AI565172, AI440238, AI658566, AI491842, AW151979, AI702540, AW172723, AI784214, AW263569, AI345688, AW055252, AI699020, AW021662, AW118508, AI590830, AW051088, AW022636, AW195253, AI887163, AI702343, AA587590, AA575874, AI801325, AI242248, AW162189, AI345010, AI344785, AI343325, AW151451, AI309306, AA259207, AI964011, AI802826, F36855, AI890887, AI345553, AI355779, AA827691, AI923989, AI289791, AI349967, AW083573, AW020381, AI280607, AI927233, AA761557, AW403717, AI308032, N75771, AI581033, AI452857, AI584118, N81195, AI627714, AI699823, AI590755, AI539260, AI860027, F34030, AI915291, AI499986, AW082532, AI348897, AI114703, AI125109, AI811192, AI688854, AI345745, AA830396, AL119791, AL047675, AL036548, AI285439, AI270039, AI688848, AI537516, AI926593, AI690813, AW194014, AI005511, AI859644, AW104141, AI784233, AI633125, AI469516, AW020046, AI698391, N63128, AI815232, AI612885, AL036265, AI817523, H89138, AI500523, AW088605, AI648699, AI241741, AI582871, AA225339, AI582932, AA514684, AI623797,</p>
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	AI619820, AA580663, AI491710, AI623363, AI783569, N99092, AI539632, R65859, AI889189, N71180, AI361701, AI491904, AI435253, AA641818, AI866573, AI343091, AI310575, AI345417, AW161098, AI161279, AI302590, AI335363, AI366984, AI583032, AI538850, AI963058, AW078729, AL047100, AL037602, AI433611, AW025279, AI590043, AI305157, AW089293, AI815855, AI299903, AI340533, R20540, AI349957, AW020592, AI288335, AI685211, AW161202, AI096771, W74529, AA493923, AI345471, AA767039, R10067, AL037582, AI559863, AI345005, AI918554, AW022494, AW079768, AI680504, AW191003, AW020288, AW009306, W45039, AL048499, AA768369, AI360195, AI630252, AA555145, AW020095, AI569616, AL135024, AW089572, AW084097, AI671642, AA279795, AI800341, AI890907, AI225000, AI357599, AI621341, AC006512, E01573, E02319, AF091512, AF067790, S61953, I48978, AL137640, AJ238278, AF002672, I89947, AR038854, A08913, I03321, AL117432, AL137258, AL133557, A08912, A08911, AF026816, A18777, X82434, S77771, AF000167, AF116573, S76508, AL133665, AL137476, AF159615, E12580, X75295, S83456, A21103, AF028823, L13297, E05822, AF141289, AL117583, E15582, AF090886, AL049452, AL050393, AF019298, A08910, AJ004832, AF113013, I89931, A08909, AF017437, X79812, AF106657, AL137550, I49625, A08907, A08908, AL122050, A77033, A77035, AF176651, I32738, AL137548, A48221, AF013214, AF185576, AL137521, A48220, I89934, Y10823, A65341, A76337, AF087943, U95114, AF090903, AF032666, AF008439, Z97214, U77594, D83032, AL133084, I33392, X06146, AL122100, AL122045, AL137533, S68736, AF090901, AL122121, X72387, A23630, E12747, X66862, AL049382,

1377	HYABC06	876168	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 657 of SEQ ID NO:1377, b is an integer of 15 to 671, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	<p>AF120268, AL137538, AF061981, U72621, AF061943, AL035458, AL136884, AF113677, AL122106, AF026030, AL050278, A07647, AL137495, A90844, AF111851, AL137459, Z37987, AL110221, AL110158, AL080140, U62966, AL080147, AF180525, AL137705, E06743, U36585, AL133560, E02152, AF111112, U75932, AF078844, AF113694, AF090934, A57389, S63521, AL133054, A86558, AL137286, AL133558, U67958, X61399, AL080159, AR000496, AL049430, U39656, X80340, AR029490, AL117626, AL137271, AF210052, Z82022, X52128, AF109155, AL137711, Y14314, AF026008, AF124728, AL133016, AF158248, AL122118, AL122093, AL080148, AL133113, AR068466, AL133010, AF182215, M92439, AF107018, Y08769, AL080118, S54890, AF183393, A65965, M19658, AF195092, AL122049, L19437, Y16645, X56039, A65340, Y11587, AL137478, AL080154, AF200464, AR059958, AF043493, AF061795, AF118558, AF151685, AF199027, A65943, U78525, AL050155, AL117435, E02221, E01614, E13364, L04504, AB029065, J05277, X96540, AR011880, I89944, I22272, AF091084, AF145233, AB028451, AL050277, E12579, I26207, I22020, AF146568, U35846, AF102578, U89295, AL110280, U88966, AL137463, AR013797, AL137554, I09360, AL137298, AL133640, AF162270</p> <p>W00981, AA095481, N79184, AI693730, AA113788, AA096381, AI373515</p>
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1378	HLYDI04	876169	NO:1377, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 487 of SEQ ID NO:1378, b is an integer of 15 to 501, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1378, and where b is greater than or equal to a + 14.	
1379	HBXFF23	876170	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 948 of SEQ ID NO:1379, b is an integer of 15 to 962, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1379, and where b is greater than or equal to a + 14.	W03002
1380	HDPBG07	876172	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2921 of SEQ ID NO:1380, b is an integer of 15 to 2935, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID	AW450363, AA806222, AI697498, AW379227, AI950341, AA477713, AW262972, AI762090, AI143168, AA062917, AW055125, AI708563, AA722270, AI190178, AI147612, AA188072, AI524191, AA280235, N44673, AI921393, AI291105, AI760852, W68464, N26444, AI373000, AI302843, AI097247, AI160536, T66196, AI804233, W78020, AW138636, AI423991, AI089967, C75569, AA565899, AI279995, AI565961, AW341212, H99338, AI299654, AA631426, AA419222, AA663984, W73977, AA954140,

			NO:1380, and where b is greater than or equal to a + 14.	<p>W51950, W69512, AA410280, AI491793, AI393820, AA128340, AA349786, AI424298, C75628, H29446, AA213410, AA599925, N35301, N44876, H29445, H43944, AW407957, AI186159, N95537, AA730169, AA662641, AW241690, AA838196, W04289, AA187171, F12045, W73396, H96739, AA082450, N54637, AI693584, AA514420, AI266534, W69601, AA805928, AA255924, N33412, C75660, AI351695, AA386137, AW291308, AI656702, AI242486, AW026628, AI423698, AW405587, H45912, AA582631, AA244409, T91940, AI693563, R81438, AI868184, H42592, AA355526, AA349785, T84915, AI001044, AW079738, Z29930, R80195, F09688, H43066, AW273143, R74231, AA419207, AI205120, H00493, AI918592, H23921, R81641, AA345108, AA361827, AI707909, AA310049, AA346697, W69413, AW407592, T66132, T87190, T18570, T87277, T18595, D61617, W24226, AA281534, T10717, AA213409, AA503305, AA477714, R50328, N44051, AA928401, AI018524, N74140, AA761812, W69429, AA922945, AI381590, AI347968, N24768, AR038868, AB016811, AR055261, AR038869, AR055262</p>
1381	HCBYBF02	876174	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 612 of SEQ ID NO:1381, b is an integer of 15 to 626, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1381, and where b is greater than or equal to a + 14.</p>	<p>AA305198, AA134366, AA259244, AI078409, AA338262, R91816, AI591375, AI460050, AA601376, AI909130, AW338376, AA484658, AW272389, AI890297, AL035847, N54947, AA522642, AA847096, N80390, AL039471, AA078337, AA515176, AW008089, AA171400, AA595499, AW247866, AW250983, T94247, AI468971, AA349437, T05143, AA297682, AI935827, AA833896, AA833875, AA493464, AW168520, AA350593, AA610381, AA568494, AI952885, AA772140, AL044674, AW080062, AA526542, AA847711, AA665645, AA601674, AA335314, AA507745, AI050050, AW088745, AI271693, T26553, AI224583, AA320262, AA847095, AA493136, AI064918, AA743517, AI000381, AA595661, N59648, AR055262</p>

R10475, AA679937, AW029515, AA666052, AA640685,  
AA218684, AA548390, AA584862, AA283455,  
AI440037, AA613627, AA524604, AI583321, F31380,  
AA523132, AL118823, AA199578, AW021105,  
AI918661, F18553, AW419209, AA314494, T57562,  
AI049845, AA551105, R92608, N26159, AI251576,  
AA582975, H88429, AI927275, AL040054, AI272241,  
AA687730, AA634882, H62123, AW169038, AA071173,  
AA613231, L78810, AL022330, AC004032, AC004925,  
AC004914, Z77249, AC004973, AF196970, AL079339,  
AC007649, AC007842, AC004986, AF205588,  
AP000031, Z75744, AL031293, AC006539, AC003668,  
AC005549, AL121578, AL049636, L05367, AP000038,  
AL021407, AL133485, AC004929, AC006026,  
AL035086, AC000115, AL031283, AL022165,  
AL031781, AP000279, AC004526, AP000135, U63834,  
AC005082, AP000106, AC007308, AP000305, Z98744,  
Z95125, AL035413, AC006251, AL109865, AL031073,  
AC005184, AC001226, AP000047, AP000115,  
AF134726, AC004996, AD000684, AP001052,  
AC007240, AF165141, AC006509, AC005484,  
AC004383, AC009731, Z98049, AC011456, AL031433,  
AC004087, AC007537, AC004079, Z98884, AC007541,  
AC005859, AC004263, AC004988, AL035653,  
AC002544, U91326, AC005412, AC002425, U95742,  
AL034419, AL009047, AC007533, Z83826, AC007216,  
AC002300, AC005828, AF207955, AL035460, U91321,  
AC004984, L29074, AP000261, AF222686, AL034379,  
AL031652, AC005632, AC007463, AC005209,  
AC002403, AP000100, AP000035, AC005048,  
AP000123, AP000055, AP000170, Z98048, AL079306,  
AL022322, AC006241, AL080239, AC002395,  
AL023883, AC005229, AL133396, AC004468,  
AC000378, Z69705, AC004063, AL033504, U91323,  
AL135960, AJ131016, AC004754, AC007371,  
AC005046, AC002110, AJ006345, AC005832,

1382	HTWD121	876177	<p>AC005829, AP000010, AC004961, AC005725, AL022239, AC002105, Z98050, AC005225, AC006270, AL031584, AL034451, U82828, AC008064, AP000247, AC007066, AP000255, AL049832, Z84484, Z84572, AC004853, AC002039, AC006062, AL033527, AL031733, AP000497, Z97353, AP000503, AL133353, AL008712, AC005377, AL096791, AC003676, AC005690, AC004938, AC007388, AC005876, AC006142, AP000102, AL034429, AF222685, AL121576, AC002492, Z73358, AP000351, AC008372, AC009399, Z97184, AL049829, AC004099, AC007538, AC005253, AL121694, AL122003, AC006430, AP000201, AC007539, AL022328, AF049895, AC002064, AC006385, AC005042, AC007955, AC007731, AC004975, AP000097, AC007682, AL049712, AL022163, AC009248, AL031985, AC006155, AP000356, AC005191, AC006965, AC007385, AC005988, AF128525, AC004033, AC005409, AL023095, AC004953, AL035411, AL049773, AC005154, Z84469, AC005500, AL021331, AC012380, AL031054, AF165926, Y10196, AP000354, AL008718, AL031287, AC000353, AC010205, AL050326, AC005375, U82696, AP000338, AL132987, U71148, AC004794, AC007200, AP000216, AC003098, AC005585, AC006141, AC005342, AP000352, AC006277, AC005378, AC004815, AC005660, AF023268, AL031055, AC004876, AL031729, Z68287, AI656807, AA897632, AW151919, AW271601, AA287933, AI393569, AA644542, AI248118, AA707517, AI240868, AI247781, AI076324, N68357, AI380870, T87807, AA808229, AW197425, AA835077, Z40387, AI458836</p>
			<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 569 of SEQ ID NO:1382, b is an integer of 15 to 583, where both a and b correspond to the positions of</p>



1383	HATED01	876179	nucleotide residues shown in SEQ ID NO:1382, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 503 of SEQ ID NO:1383, b is an integer of 15 to 517, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1383, and where b is greater than or equal to a + 14.	AI792782, AI191919, AI765864, AI733139, AA702347, AI220405, AI423312, AI478373, AW302194, AI423507, AI916231, AI627973, AW173486, AI086574, AI701146, AI521715, AI917438, AI678790, AI925944, AI770081, AA760715, AI904742, AI582603, AI990352, AI951007, AI655622, AI650463, AW173518, AI393071, AW236096, AI989921, AI022200, AI024409, AI393059, AI695050, AA888360, AI206995, AI077536, AI474034, AI452440, AW194978, AI076106, AI206908, AA969379, AA551593, AI223442, AI302211, AI968178, AI571592, AI241002, AL034553, D86198, AF007875, AB004789
1384	HWLVU14	876182	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1216 of SEQ ID NO:1384, b is an integer of 15 to 1230, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1384, and where b is greater than or equal to a + 14.	AI347147, AI738411, AI439130, AA514394, AA595253, AI269359, AW028586, AI936898, AI739648, AW242697, AW027766, AA081901, AI739639, AW157368, AI739255, AI393079, AI244459, AA226866, N99765, AW418654, AA480225, AA905814, AA999828, AC007501, U80736
1385	HOVC112	876183	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 368 of SEQ ID NO:1385, b is an integer of	AA307780, AI923248

1386	HCYBB01	876184	15 to 382, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1385, and where b is greater than or equal to a + 14.	AW188031, AI922934, AA504414, AI536863, AA744849, AA972022, AA309130, AI569395, AA135144, AI570856, AW021626, AA904846, AA962329, AA737604, AI351478, AI560610, AA765375
1387	HCRPM32	876187	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1188 of SEQ ID NO:1386, b is an integer of 15 to 1202, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1386, and where b is greater than or equal to a + 14.	AA019767, AA213771, H86330, H85652, H86775, H86333, AI990107
1388	HLDNV31	876192	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1658 of SEQ ID NO:1388, b is an integer of	AI741793, AW003635, AA425065, AL044729, AI825212, AI333124, AW102958, AA699738, AW014983, AI580520, AA653341, AI248768, AW057987, AA961070, H11570, AA913775, AI425117, AI452997, AI937807, AL039909, AL041387, AA398627, AI223186, T87214, AL045603, AI638724, AA644230, R45377, AI700094, T74013, Z21364,

1389	HCRNN03	876193	<p>15 to 1672, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1388, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 434 of SEQ ID NO:1389, b is an integer of 15 to 448, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1389, and where b is greater than or equal to a + 14.</p>	<p>AA749051, F10219, R14519, AI242930, R40666, R21286, F12602, AA887964, H11462, AA416562, Z21365, AI890224, R41179, AA829590, AA417298, AA653411, AA837654, AI221436, AA493103, AW082244, R14339, AA055888, AW389658, T67466, T97917, R08296, AB002326</p> <p>AC005219</p>
1390	HTPIQ89	876198	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 868 of SEQ ID NO:1390, b is an integer of 15 to 882, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1390, and where b is greater than or equal to a + 14.</p>	<p>AI808815, AI457550, AI911077, AI658931, AI916359, AW009684, AW072228, AA579578, AA622141, AA295027, AA552628, AA594836, AA551833, AI167645, AA576815, W23220, AF114127, AB014603, AL137668</p>
1391	HWLQD01	876200	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 409 of</p>	

1392	HISAQ01	876201	SEQ ID NO:1391, b is an integer of 15 to 423, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1391, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 842 of SEQ ID NO:1392, b is an integer of 15 to 856, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1392, and where b is greater than or equal to a + 14.	
1393	HCRMC10	876206	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 627 of SEQ ID NO:1393, b is an integer of 15 to 641, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1393, and where b is greater than or equal to a + 14.	N24236, AI742828
1394	HWABD53	876207	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 698 of	T25873, AW024164, C06355, AI476066, H79253, C06056, R78935, AI436456, AI064830, AL121270, AL047042, AL046849, AI349772, AI686926, AL045500, AI433157, AL047763, AI433976, AL040243, AW117882, AW071349, AI608667, AI275175, AL119049, AL044207, AI580190,

			SEQ ID NO:1394, b is an integer of 15 to 712, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1394, and where b is greater than or equal to a + 14.	AL119791, AI440426, AI500077, AI281779, AL036980, AL036146, AW074993, AI687728, AI868831, AI349645, AW268253, AI312152, AI345735, AL119748, AI567351, AI620284, AI349937, AI538716, AI469532, AI699857, AW089572, AI497733, AI818683, AW169653, AI340582, AW071417, AW301409, AL135661, AI349004, AI597750, AI499463, AI873731, AI863014, AI590128, AI800453, AW087445, AI521012, AI282655, AW162071, AI349256, AL036396, AW195957, AI250293, AI678302, AI568870, AW274192, AW148320, AI343112, AI702406, AW303152, AL036802, AI758437, AW103371, AI440239, AI680113, AI687376, AI800433, AW238730, AI597918, AI349933, AI934036, AI679724, AW068845, AI500553, AI635461, AI439087, AI207510, AL048871, AL121365, AI635942, AI857296, AI475371, AI564719, AI349614, AI920968, AI348897, AL038778, AI866608, AI499131, AI815383, AI281773, AI631107, AI499393, AI874109, AI697137, AI909641, AI636456, AI285735, AI334902, AI445432, AI625079, AL036274, AI906328, AI609592, AI583316, AI475134, AL120854, AI862142, AI540832, AI613017, AI500659, AI249257, AI687415, AI498579, AI702433, AI687375, AL038605, AI690835, AI919058, AI633419, AI866002, AI952114, AA585422, AI492540, AW074869, AI568855, AI889203, AW301300, AL120736, AI536685, AI539771, AW167776, AI671679, AI610307, AI224992, AI283941, AL119828, AI696846, AA640779, AA613907, AI909666, AI673256, AI366549, AI612913, AI349598, AL040169, AA572758, AL036759, AI818206, AA508692, AI340519, AI690751, AI349226, AI568854,
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AI567632, AI271786, AI269696, AI889839, AL038779, AW302965, AI682841, AL121014, AW166645, AW075351, AI753683, AW080838, AI684265, AI318569, AI866780, AI811353, AI307466, AI366991, AI907070, AI446606, AW302992, AI866887, AI969601, AL047041, AI679764, AI859733, AI469811, AI754897, AI439745, AI628205, AI281762, AI343059, AI811863, AI580984, AL043326, AI270055, AI813914, AL036240, AI282281, AI434281, AI802542, AL036260, AW026882, AI610645, AI499512, AW235035, AW268072, AI696398, AI800411, AW269097, AI624668, AI569616, AI909662, AI445025, AI921379, AI312428, AI251485, AW085799, AI274541, AW104724, AL036247, AI570384, AI591311, AW183130, AW132121, AI678989, AI309401, AI446628, AI620868, AL121463, AL036631, AW118557, AL042753, AI969567, AI609331, AI269205, AI282903, AI432229, AI653541, AI340603, I48979, AF090900, AL133640, AL117460, AL133606, AF090903, S78214, AF090934, AF113694, L31396, L31397, AJ242859, AL050146, S68736, AL049452, I89947, AF090943, AF078844, AL117457, AF125949, AL080060, AF090901, AF113013, AL050393, AF118070, AF113691, AF118064, A93016, AL133016, AL110221, AL110196, Y11587, AL137527, U42766, AF104032, AL049938, AF113690, AL050149, I89931, AF090896, AL122050, AR059958, AF113689, AL050116, AL050108, AL049314, A08916, AF113676, AL133075, X84990, AF113677, AB019565, AF106862, AL049466, AL133557, AL096744, AF017152, AL122093, AF113019, A08913, AF111851, AF113699, AL080137, AL133093, AL133080, AL080124, AL137283, AL050277, AR011880, Y16645, AF097996, E03348, AL133565, AL137557, AF158248, AL122123,				
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1395	HKCSF17	876208	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 906 of SEQ ID NO:1395, b is an integer of</p>	

1396	HTDA112	876209	<p>15 to 920, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1395, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1087 of SEQ ID NO:1396, b is an integer of 15 to 1101, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1396, and where b is greater than or equal to a + 14.</p>		
1397	HYABB57	876213	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 434 of SEQ ID NO:1397, b is an integer of 15 to 448, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1397, and where b is greater than or equal to a + 14.</p>	<p>N73548, AI694413, AW271652, AI082035, AI912946, AI719718, AA024658, W24189, W24182, AW015394, T79755, AA988043, AI709339, AI510754, AI656335, AL031983, AC006137</p>	
1398	HWLVN09	876215	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 749 of SEQ ID NO:1398, b is an integer of</p>	<p>AI088609, AI742316, AI264197, AI803475, AI307145, AI129474, AA442089, AI886144, AI249368, AI864189, AI584049, AI696838, AW058403, AA428062, AI913435</p>	



1399	HOHAU02	876220	15 to 763, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1398, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 305 of SEQ ID NO:1399, b is an integer of 15 to 319, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1399, and where b is greater than or equal to a + 14.	AI903943, AI903949, AL035420, AC005082, AC008064, AL022727	
1400	HCRNJ43	876224	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1561 of SEQ ID NO:1400, b is an integer of 15 to 1575, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1400, and where b is greater than or equal to a + 14.	AA313797, W73983, AW374097, AA824282, AI207345, Z26317	
1401	HWLGV14	876226	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1299 of SEQ ID NO:1401, b is an integer of	AI110653, AA573785, AI421829, AI889106, AI815098, AW082282, AW151910, AA309046, AW251068, AI688082, AI935867, AA903732, AI342309, AI469758, AI301940, AI336447, AI660665, AI625318, AI636809, AI559518, AI216199, AA974182, AI336445, AI476296, AI272699, AA865622, R95048, AI832439, AI908555,	

1402	HCBM15	876228	<p>15 to 1313, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1401, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 516 of SEQ ID NO:1402, b is an integer of 15 to 530, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1402, and where b is greater than or equal to a + 14.</p>	<p>AW079674, AW276067, H71284, AI290972, AI659188, H41084, H39231, AI865986, AI333305, R76336, AI914585, AI590410, H12385, AA987621, R48364, R94963, AA639087, D45438, C20912, AI274107, AI720940, H70884, AA372940, AW250334, H15022, AI244423, AW192993, AA935031, AI199655, AI199654, H15021, AI832803, AA593195, AW269879, AA886276, AI225252, R45920, AF115384, AC006479</p> <p>AA305646, D57483, C14389, D80391, D59787, D80196, D81026, D80253, D80522, D58283, D80366, D51022, D80227, D59859, D59467, D80043, D51423, D80022, C14331, D59275, D80166, D80195, D59619, D80210, D51799, D80164, D80240, D59927, D59502, D81030, D50979, D59889, D80248, D80212, D80251, D50995, D80269, D80188, D80219, C15076, D80038, AA305578, D80133, D59610, D80024, AA305409, D80193, D80378, AA514186, AW177440, AA514188, D80241, C75259, C14429, AW178893, D80045, D51060, AW377671, T03269, AW360811, AW179328, D80132, C14014, D58253, AW378532, AW375405, AW177501, AW177511, C05695, AW178762, D59373, D80134, D80268, AW366296, AW360844, D80439, AW360817, D51250, AW375406, AW378534, AW179332, AW377672, AW179023, AW178905, T11417, AW178775, AW369651, AW177505, AW179024, AW352158, F13647, D80949, AW352117, D80302, AW176467, AW352171, AW377676, D80247, AW178906, AW352170, AW177731, AW178907, AW179019, AI910186, AW360841, AW179020, AW178909, AW177456, AW179329, AW178980, AW177733, AW378528, AW178908, AW178754, D51079, AW179018, AW352174, AW179004, AW179012, AW360834, AI905856, D51103, AW178914, AW378525, C06015, AW367967, D80157, AW177722, D59627, D58101, D59503, AW177728, AW179009, D51759, AW178774, AW178911, AW378543, AW352163, AW378540, AW178983, Z21582, AW178781, T48593,</p>
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1403	HTXOU56	876229	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1396 of SEQ ID NO:1403, b is an integer of</p>	<p>AA897516, AW408837, AA975111, AI375439, AW058357, AI831278, AA429693, W17288, N92884, AI800566, H90037, W25564, N89755, AW075779, N90701, H64915, H64916, AA019995, AA864899, AF177934, L47207, I36298, X97874</p>

1404	HHFCN93	876232	<p>15 to 1410, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1403, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1428 of SEQ ID NO:1404, b is an integer of 15 to 1442, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1404, and where b is greater than or equal to a + 14.</p>	AA769099, AW051928, AI701149, AW166012, H14423, AA972142, AI339332, N92764, R59745, AA100558, AI383947, AA347767, AA015757, AI338203, AA347768, D81417, H72916, AA805417, D20390, AI025219, R52023, H14749, AA504717, AC006366, Z55318
1405	H2CBC05	876236	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1675 of SEQ ID NO:1405, b is an integer of 15 to 1689, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1405, and where b is greater than or equal to a + 14.</p>	AI743549, AI953907, AW444710, AI457576, AA452352, AI744355, AW169608, AA452129, AA809771, AI284062, AA307160, AW363101, AI865348, AA907553, AI620087, AI936509, AA618311, AA456277, AA454662, AA173381, AA534032, AI369959, AW000933, AW298707, AW363100, AA478933, N90372, AI186424, C14331, D80166, AA809122, D80439, D80247, D59619, D80210, D80240, AI557751, D59927, D81026, D80022, D81030, D80219, D80212, D80133, C14389, AA305409, C14014, D80391, D59787, D59859, AA514186, D59502, D51423, D51799, D80253, D80043, C14344, D80522, D51060, D80196, D80157, D80268, C15076, D80248, D80366, D80195, D58283, D80188, D80164, D59467, D51022, D59275, D80038, D80227, D50995, D59610, D57483, D80193, D80045, D80269, D59889, D59653, D50979, D80024, AA305578, D51759, D80302, AA514188, AW360811, T03269, D80241, D80251, AI535686, AW377671,

				D80378, D51103, C06015, AW177440, T03116, AI525923, C05695, AW178893, D45260, C75259, D58246, D59373, AW375405, AW360844, H67866, C14407, C03092, H67854, C14973, AW366296, AW177501, AW178906, AW177511, AW360817, AW179328, AW179020, T48593, AW375406, AW378534, AW352171, AW179332, AW377672, AW179023, AW178905, D80064, AW177731, AW378528, AW178762, AW178754, AW179019, AW179024, AW377676, AW378532, D81111, T11417, Z21582, AI525917, AW360841, AW352120, D51221, C14227, AW177505, AW178775, F13647, D80258, AW178909, AW177456, AW179004, D59503, AW352170, D51250, AW178986, AW178907, AW177733, AW178908, AW179018, AW352158, AW178971, AW360834, AW352117, D59317, D80014, D59474, N66429, AI525920, AW177734, AW378533, D80949, AA514184, AW367950, D58101, AW179009, AW179012, AW178980, AW178914, AW178774, AW178781, AW378543, AW378540, AI557774, C14957, D60010, H67858, AW179013, D59551, D80168, C14298, AI525235, Z30160, AW178759, AI525215, AW178911, AI525227, AW378525, C14046, AW352163, AW378539, AI525912, D80228, AW177728, D59695, Z33452, AA285331, D51053, D45273, AI525242, C16955, D59627, D51213, AW378542, C05763, AI525925, AI525222, T02974, D13645, A62298, A84916, A82595, AR018138, A62300, A30438, AR008277, AR008281, Y17188, Y17187, AR008278, AF058696, AR060385, AB028859, AJ132110, AB002449, I50126, I50132, I50128, I50133, U46128, AR016691, AR016690, X82626, AR016514, I14842, X67155, AR060138, A45456, A94995, D26022, A26615, AR052274, A43192, Y12724, A43190, AR038669, A25909, AR066488, Y09669, AR066487, X68127, A67220, D89785, A78862, D34614, AR054175, AR008443,

1406	HTEPE28	876238	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 694 of SEQ ID NO:1406, b is an integer of 15 to 708, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1406, and where b is greater than or equal to a + 14.</p>	<p>A63261, D88547, D50010, AR062872, A70867, AR008408, A64136, A68321, I79511, AR025207, D13509, AR060133, AF123263</p> <p>AA205046, AA383391, AI184616, AA223825, AI825541, AI469846, D42084</p>
1407	HUSGL79	876239	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 824 of SEQ ID NO:1407, b is an integer of 15 to 838, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1407, and where b is greater than or equal to a + 14.</p>	<p>AA045573, AA279920, R20139, AA372783, H21473, AB010812, AC004520, AF125534, AC007225</p>
1408	HPMFU84	876259	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 918 of SEQ ID NO:1408, b is an integer of 15 to 932, where both a and b correspond to the positions of</p>	<p>AI017564, AA809290, AW002023, AA405338, AA806993, AA405339, AA88974, AA236935, AI024655, AA262702, H49789, AI524770, N77703, AA362512, T88993, AA328171, C01908, U43374</p>

1409	HDLAD09	876260	nucleotide residues shown in SEQ ID NO:1408, and where b is greater than or equal to a + 14.  Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 751 of SEQ ID NO:1409, b is an integer of 15 to 765, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1409, and where b is greater than or equal to a + 14.	W79877, Z42158	
1410	HCQAW45	876261	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 518 of SEQ ID NO:1410, b is an integer of 15 to 532, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1410, and where b is greater than or equal to a + 14.	AI829532, AL008582	
1411	HCYAC01	876265	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 538 of SEQ ID NO:1411, b is an integer of 15 to 552, where both a and b correspond to the positions of	AA308914, AA308913, D59927, D50979, D80227, D58283, D80188, D80253, D80195, D80043, D59275, D80269, D59502, D59859, D80022, D80166, D80366, D81030, D51423, D59619, D80210, D51799, D80391, D80240, D59787, D80378, D80038, D80212, D80045, D80193, D80196, D80164, D80219, D57483, C14389, D59889, D50995, D80024, D59467, D59610, C14331, C15076, C14429, D80241, D51060, AA305409, T03269, D80522, D58253, C75259, C14014,	

			<p>nucleotide residues shown in SEQ ID NO:1411, and where b is greater than or equal to a + 14.</p> <p> AW178893, D81026, D80134, AA305578, D51022,  AW179328, D51250, D80268, AW177440, F13647,  AW378532, AW178775, D80251, D80949, AW369651,  D80168, D59695, AA514188, D52291, D51079,  C14227, AW352158, D80248, AI910186, D81111,  AW178762, AI905856, AW177501, AW177511,  AA514186, D80133, AW360811, Z21582, C14298,  D80064, C05695, AW352117, C14407, AW176467,  AW375405, AW377671, D80132, AW360834, AW378540,  D80302, AA285331, AW366296, AW360844, AW360817,  AW375406, AW378534, D51097, AW179332, AW377672,  AW179023, AW178905, AW352171, AW377676, D80439,  AW178906, AW352170, AW177731, AW178907,  AW179019, AW179024, D59373, D80247, AW179220,  D80014, AW177505, AW360841, AW179020, AW178909,  T11417, AW177456, AW179329, AW178980, AW177733,  AW378528, AW178908, AW178754, AW179018,  AI557751, D51103, AW179004, AW179012, C06015,  AW352174, AW178914, T03116, AW378525, AW367967,  D80157, AW177722, D51759, AW179009, AW177728,  AW178774, AW178911, AW378543, AW352163, D80258,  AI557774, AA809122, D59653, AW178983, AW352120,  AW178781, D45260, T48593, D59627, T02974,  C03092, AI535850, AW177723, H67854, H67866,  AW378539, AI525923, D59317, D51213, D45273,  C14975, T03048, D59503, AW367950, AW178986,  D59474, AA514184, AI525917, AI525227, D58246,  D60010, C14973, C14344, AW378533, C14957,  D59551, AI535686, D51221, AW177734, AI525920,  D60214, D58101, AI525242, C14046, AI525912,  AI525235, C16955, AI525925, AI525237, AI525215,  AW378542, C05763, Z33452, AI525222, AW360855,  T02868, D31458, C04682, H67858, AI525928,  C13958, U49017, A84916, AJ132110, A62300,  A62298, AR018138, X67155, Y17188, D26022,  A25909, A67220, D89785, A78862, D34614, D88547, </p>
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1412	HCROF86	876266	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1086 of SEQ ID NO:1412, b is an integer of 15 to 1100, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1412, and where b is greater than or equal to a + 14.</p>	<p>AR008278, AF058696, X82626, AB028859, I82448, AR025207, Y12724, AB012117, A82595, X68127, AB002449, AR060385, AR016808, A85396, AR066482, A44171, A94995, A85477, I19525, A86792, U87250, X93549, AR008443, I50126, I50132, I50128, I50133, AR016514, AR066488, AR060138, A45456, A26615, AR052274, I14842, Y09669, AR066487, A43192, A43190, AR038669, AR054175, A30438, AR066490, Y17187, I18367, A63261, AF135125, D88507, AR008277, AR008281, D50010, AR062872, A70867, AR016691, AR016690, U46128, AR008408, I79511, A64136, A68321, AB033111, D13509, U87247, AR060133, AR064240, AF123263, AR032065, U79457, X93535</p>
1413	H2CB183	876269	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 549 of SEQ ID NO:1413, b is an integer of 15 to 563, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	<p>AI650543, W69438, W69521, H10084, AA489949, R13756, Z43027, F07990, F06224, AA326226, AW388196, AW388234, AW388225, AW388262, AW388176, AW388206, AW388208, AW388214, AW388253, AF086275, AB024057, AB017114, U88873</p> <p>AA403070, AA313305, AA361460, T78498</p>

1414	H2LAW73	876270	<p>NO:1413, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 569 of SEQ ID NO:1414, b is an integer of 15 to 583, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1414, and where b is greater than or equal to a + 14.</p>	AA315703, AI796815, T99503, AI049875, D80022, D80391, D59787, D80253, D81026, D80196, C14389, D80522, D80366, D80195, D59502, D59467, D80164, D59275, D80227, D58283, AA305578, D80193, D80043, D50979, D59859, C14331, D80166, C15076, D51423, D59619, D80133, D80210, D51799, D80240, D80212, D50995, D81030, D80269, D80248, D80038, D80188, D80219, D59927, D80251, D57483, D59610, D80378, AA305409, D51022, D80045, D59889, D80024, AA514188, AW177440, D80241, T03269, AW178893, AW377671, AA514186, AW360811, AW179328, C14014, AW378532, AW375405, D80268, AW352117, D51250, AW178762, D80168, AW366296, AW360817, AW375406, AW378534, AW352171, AW179332, AW377672, AW377676, AW179023, AW178905, AW178754, AW179024, D52291, D80302, F13647, AW179020, AW177456, D80439, T11417, AW178906, AW177731, AW178907, AW179019, AW179018, D80247, C06015, AW378528, AW178908, D51103, Z21582, AW360834, AW178914, AW178781, AW378543, AW378525, AW378540, AA593344, D80157, D59627, D59503, AW178774, AW352163, D58101, AA809122, T48593, D80064, T03116, C14227, D45260, AI525923, AI557774, AA285331, D51213, C03092, H67854, H67866, D80258, AW378533, D81111, D59317, AI557751, D45273, AW367950, AW178986, D59474, AI525917, T03048, D58246, AW378539, AW179013, D80014, C14973, C14344, AA514184, AI525227, AI535686, D51221, D59551, AI525920, C14407, Z30160, H67858, AI525242, AI525235, AI525925, C16955, AI525912, T02868, Z33452, T02974, AI525215, D31458, C13958, C14298, AW378542, AI525237, AJ132110, A84916, A62298, AR018138, AF058696, A62300, AB028859,
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1415	HWMCL22	876274	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 404 of SEQ ID NO:1415, b is an integer of 15 to 418, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1415, and where b is greater than or equal to a + 14.</p>	<p>AR008278, X67155, Y17188, D26022, A25909, Y12724, A67220, D89785, A78862, D34614, I82448, D88547, A82595, X82626, AR016808, A94995, AR060385, AR025207, AB002449, AR008443, I50126, I50132, I50128, I50133, AR066488, AR016514, AR060138, A45456, A26615, AR052274, I14842, Y09669, A43192, A43190, AR038669, AR054175, AR066487, AR062872, A30438, Y17187, X68127, A63261, D50010, AR008277, AR008281, A70867, AR016691, AR016690, U46128, AR008408, I79511, A64136, A68321, AR060133</p> <p>R86344, R86183, AC004686</p>
1416	HCRPZ42	876276	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 499 of SEQ ID NO:1416, b is an integer of 15 to 513, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1416, and where b is greater than or equal to a + 14.</p>	AA285061
1417	HCYBM32	876277	Preferably excluded from the	AA305407, D51423, D51799, D80166, C14389,

<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 428 of SEQ ID NO:1417, b is an integer of 15 to 442, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1417, and where b is greater than or equal to a + 14.</p>	<p>D80133, D80522, D81030, D51060, D80248, D59610, D80366, D81026, D59859, D59619, D80210, D80240, D80253, AW377671, D80269, C14331, D58283, D80212, D50995, D80188, D59467, D51022, D80022, D50979, D80219, D80227, D80195, AA305409, D80391, D80164, D59275, D80038, D80043, D59787, D59502, D80241, D80251, D57483, D59889, D80196, D80024, D59927, AA514188, C15076, C14014, AA305578, D80193, D80268, AA514186, D80045, D80378, D80439, AW360811, AW177440, C14429, AW178983, C75259, AW178893, C06015, D59373, D80247, T03269, D80302, AW375405, AW360844, T11417, AW177501, AW179328, AW177511, AW366296, AW360817, AW375406, AW178906, AW378534, AW352171, AW179332, AW377672, AW179023, D80157, AW178905, C05695, AW378532, AW377676, D51103, AW360834, D51759, D80134, AW177505, AW360841, AW178775, D80132, D58253, D59653, D81111, AW178909, AW352170, AW178762, AW177731, AW367967, AW178907, AW378528, AW178754, AW179019, AW179018, AW179024, AW352117, D51250, AW176467, AW369651, D45260, AW179020, AW177456, F13647, AW179329, AW178980, AW352158, AW178914, AW177733, AW178908, AW178971, T48593, AW352174, AW179017, AW179004, AW178774, AW378543, AW179009, AW179012, D80064, D80258, C14227, D58101, AW352120, AW378525, AW352163, D80014, H67854, C14077, D50981, D58246, C03092, AI525923, T02974, AW178911, H67866, AW177722, AI910186, AW177728, AA514184, AA809122, T03116, D59503, AW367950, AI905856, AW378540, D59317, C14407, AI525917, AW178781, AI535959, AI525920, D45273, D51221, T03048, D60214, C14344, D59474, AW178986, C14973, AW378533, AI557774, AI535850, AW378539, AW177734, AW177723, C14957, D60010, C14298, AI535686, AI525235, D59551, AI525215,</p>
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1418	HCRPJ72	876278	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 915 of SEQ ID NO:1418, b is an integer of 15 to 929, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1418, and where b is greater than or equal to a + 14.</p>	<p>AI557751, AI525227, D80168, C14046, D59627, AI525222, AW179011, AI525912, AW179013, D51213, AI525242, AA285331, AI525925, Z21582, D51097, H67858, C16955, Z33452, Z30160, AW378542, C05763, D80949, AW178759, AI525928, AW360855, AI525237, D59695, D52291, D51053, C04682, C06084, T02868, D50312, AF015606, D50313, AF015605, D50314, D88159, E12830, A62298, AR018138, AR008278, AF058696, A84916, A62300, AJ132110, AB028859, AF015607, A82595, AR008443, AR060385, X67155, Y17188, D26022, Y12724, A25909, AB002449, A94995, A67220, D89785, A78862, D34614, I50126, I50132, I50128, I50133, D88547, AR066488, AR016514, AR060138, A45456, A26615, AR052274, X82626, AR025207, Y09669, A43192, A43190, AR038669, AR066487, I14842, AR054175, A30438, Y17187, AR066490, AR008277, AR008281, A63261, D50010, I18367, X68127, AR062872, A70867, AR016691, AR016690, U46128, AR008408, I82448, A64136, A68321, I79511, AB012117, D13509, AR060133, AR066482, A85396, D88507, AF123263, A44171, AR032065, A85477, I19525, A86792, U79457, X93549, AR008382, AI346422, AI246769, AI304342, AI910457, AI381007, AA541292, AI129972, AA496921, AW089855, AA627519, AA627188, AW082592, AA923632, AA577580, AW439990, AI650301, AI676154, AC004080, U41813, AF010258, U81511, X13537, X13536, M28449</p>
1419	HKCSA58	876280	Preferably excluded from the	A15979

			present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 230 of SEQ ID NO:1419, b is an integer of 15 to 244, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1419, and where b is greater than or equal to a + 14.	
1420	HMWFC49	876281	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 158 of SEQ ID NO:1420, b is an integer of 15 to 172, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1420, and where b is greater than or equal to a + 14.	AW410053
1421	HMSIE02	876282	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2279 of SEQ ID NO:1421, b is an integer of 15 to 2293, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1421, and where b is greater than or equal to a + 14.	AW451452, AI040326, AI650832, AA313243, AI650393, AI818259, AA534633, AI094737, AI033652, AI693411, AI341518, W30723, AW197245, AW051598, AW291994, AI274289, AI221551, AA035621, AA653321, AA634950, AA781232, AA136077, N99062, AA806117, AA136161, AA722867, AA932876, AI435016, AI659053, AI474321, H87560, AA843369, H21542, AA361623, N47604, N45494, AI907694, AA332538, H87452, AI284255, AA037342, AA365059
1422	HCRMZ34	876284	Preferably excluded from the	AA034416, AA491400, AA504783, W65331, AI885434,

1423	HTGAM27	876300	<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1646 of SEQ ID NO:1422, b is an integer of 15 to 1660, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1422, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 296 of SEQ ID NO:1423, b is an integer of 15 to 310, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1423, and where b is greater than or equal to a + 14.</p>	<p>AI553873, AI637992, AW172551, AA236838, AA053881, AA482166, AI680567, AI184074, R43006, AA491299, W61314, AA884262, R17801, AA888033, U96876</p> <p>AA187449, AW361774, AL034396, L14787, Z99130, AL031115</p>
1424	HCBYB120	876304	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 3092 of SEQ ID NO:1424, b is an integer of 15 to 3106, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1424, and where b is greater than or equal to a + 14.</p>	<p>AI433336, AI763355, AI911988, AI436136, AI609777, AI859398, AA197062, AA305389, AI346370, AW271204, AA825907, AW242356, AI910841, AI673503, AI632367, AW269183, AW196356, AW273255, AI304550, AI419935, AI270299, AI247514, W01219, AI355117, N72988, AA030042, AW007158, AA070475, AW006961, AI304462, W57671, AA876039, AA705874, AA831500, H62242, AA897761, W03289, AA029912, AA305307, H93491, W91963, H82187, AI245415, AA643520, AW088307, H93492, R89908, AA377111, AI318375, AI961885, AA059231, AA883186, AW139085, AA581261, T85676, Z40302, AA887782, AA502293,</p>

1425	HNEDH18	876306	<p>AW264318, H62331, R93209, R07861, AA360792, H82082, T29678, F01458, AA527320, H61166, AI270229, AI932770, AW070350, R07916, AI765901, F04303, N74218, AA581216, AW268185, AI334444, AW274341, AW268947, AA128235, AI699588, AA128234, AI581851, C14331, D80022, D58283, D59927, D80247, D80248, D80043, C14389, D80227, D59467, D51799, D80439, D59502, D50995, D59859, D80522, D80166, D80195, D51423, D59619, D80210, D80391, D80164, D59275, D80240, D80253, D80038, D80269, D59787, AA305409, D51060, D81030, C14429, D81026, D80212, D80268, D80366, C15076, D80196, D80188, D51022, D50979, D80219, D80378, D59610, AA305578, AA514188, C14014, D57483, C03092, D59889, D80193, D80133, D80045, AA594216, D80024, AA514186, C06015, D80302, D80157, AW360811, D51103, AW177440, D59653, D51759, D80241, D80251, AW178893, T03269, AW377671, AW375405, C75259, H67866, D45260, H67854, T11417, AW352170, AW366296, AW178906, C14344, AW360844, X12901, A07400, M98454, A14103, A26237, X04657, AF058696, A62300, A82595, A84916, A62298, AB028859, AR060385, AJ132110, AR018138, AR008278, AB002449, I50126, I50132, I50128, I50133, AR016514, AR054175, X67155, AR060138, A45456, I14842, Y17188, A94995, D26022, A26615, AR052274, A43192, Y12724, A43190, AR038669, A25909, AR066488, Y09669, AR066487, Y17187, A67220, D89785, A78862, D34614, A30438, AR008443, A63261, AR008277, AR008281, AR062872, A70867, AR016691, AR016690, U46128, D50010, D88547, I79511, X82626, A64136, A68321, AR008408, X68127, AR025207, AR060133, AF123263, AR032065, AA297291, AA504969, AA504982, AL119401, AA622598, AL134137, M20317, X14448, AL035422,</p>
			<p>Preferably excluded from the present invention are one or more</p>



1426	HWMPQ61	876308	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 338 of SEQ ID NO:1425, b is an integer of 15 to 352, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1425, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1953 of SEQ ID NO:1426, b is an integer of 15 to 1967, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1426, and where b is greater than or equal to a + 14.</p>	U78027, M18242	AA769602, AA524145, AW007155, AI127421, AI826426, AI815931, AW193517, AI951907, AA290918, AA573859, AI879177, AI912328, AW070886, AI376231, AI352472, AW296096, AI956172, AA283702, AA583479, AA486429, AI095623, N91996, AA405889, AI089975, AA493377, AI147623, AA147930, H09366, AI879560, AI698813, AI93913, AA580211, AA737974, AI476337, AA423896, N24051, N32340, N66204, AA405729, AA507484, AI374680, AA489431, AA157554, AA147501, N35409, AA505515, AA489372, AA127433, N55519, H15112, AA173145, N57433, AA471177, AW401453, N63852, T78215, AA857801, N52066, H09309, AA780883, AL079771, AA356048, AA769879, AA173273, R25268, AA127432, R46621, AI707462, AA807765, AI423315, AA877529, AA836375, AA352973, AA148410, H85254, AA356047, AA326793, AA678778, R53945, AA278977, N99204, AA335034, R07396, AA423831, AA367574, AA715745, H84922, AI762734, R07347, F05138, AA058460, AW339712, AI701737, T29480, AA995682, AI815735, N48041, AI362375, N35874, F01382, AA329166, AA295203, AI476572, AA370912, H15111, AW182730, H09397, AA772378, AA158205, AA564008, D19907, AW161156, AI540674, AI918449, AW020406, AI587121, AL041150, AW020397, AI491904, AI564716,
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	AI923389, AW021717, AW410302, AI224373, AI307557, AA464646, AW020592, AI289310, AI623941, AI859991, AW236692, AI609760, AI879064, AI267185, AI567582, AL042753, AW020095, AI811603, AI621341, AI311472, AL038986, AI049850, AI927233, AI656188, AI560722, AA806534, AA502794, AI350489, AI679506, AW020710, AI961414, AI633383, AI580214, AL048871, AI349012, AI521005, AL079963, AL036705, AI525653, AI581033, AI590943, AI758445, AA580663, AI432570, AA641818, AI589428, AW192109, AW051059, AI242248, AI741158, AI499963, AW102798, AW021066, AW084056, AW057937, AW148876, AI638644, AI537677, AI434731, AW148478, AI141727, AW020373, AL048323, AI432507, AW169784, AL048340, AI382313, AI587209, N22276, AA514684, AI282268, N29277, AI538764, AI440263, AW020419, AI587000, AW160905, AW162194, AI273856, AI491710, AI891125, AW151136, AI536685, AI499279, AL079799, AI860027, AW129106, AI697236, AI797538, AI458588, AI348901, H41759, AI500061, AI372009, AW327825, AW022168, AA455772, AI699865, AW020629, AI002285, AI279925, AW085350, AI241901, AL138406, AL046466, AI281757, AI270295, AI632036, AI471282, AI500514, AW073996, AI872423, AI950892, AI341690, AW051088, AI890907, AI624245, AI524654, AI633125, AI472484, AW265582, AI698391, AI538564, AL036361, X15653, Y09008, A64377, AC007637, X89398, AC010582, Y08975, X99018, U55041, AL110292, X92986, X79093, A64383, AB016226, AL133637, I89947, U49908, E01614, E13364, I48978, AF175903, AL050024, AL122050, AL137529, AL137533, A08910, A08909, AL117460, AF026124,

AF145233, A08908, Y11254, AL133560, AF082526,  
M85164, X70514, AL049996, AL050172, AJ005690,  
AR038854, AL110296, AF090900, AL080156,  
AF118090, AL137258, A08913, AF094480, I08319,  
U91329, J05277, AL049283, AF087943, A08912,  
AF146568, AF113690, AL133080, U42766, S76508,  
AL137523, AL035407, AL117587, AL133623, X82434,  
E06788, E06790, E06789, AF061795, AF151685,  
AF177401, AL137480, AF031147, AL137459, M96857,  
AL133568, AL137550, A91160, AL137539, AB031064,  
A08916, E05822, AL133640, AL049347, AL050277,  
AF118094, X06146, Y09972, E12747, A21103,  
AF159148, S36676, X99257, X60786, Y13350,  
AL137530, A76335, AR038969, AF111851, X63162,  
AF079763, AF111849, AL137574, S77771, S83440,  
S68736, A08911, AL080118, A18777, AL122110,  
AF061943, X67688, Y16645, AL110218, AF113699,  
AF069506, AF141289, U86379, I48979, AJ010277,  
I89931, A77033, A77035, AF017790, Z72491,  
AL117457, AL133606, D16301, I89934, I49625,  
A08907, L04849, AF065135, AF081366, S69385,  
AL133016, AJ003118, AL096728, AL050280, U55017,  
AL110199, AL110269, A15345, AL117648, AL049324,  
A07588, AF067728, A65341, Z13966, Z82022,  
X86693, AL122093, Y07905, AL117435, AR034821,  
AL137555, U35846, L04504, Z97214, X98066,  
AR020905, L13297, AL049339, AL137560, AL110221,  
X59414, AF158248, AL110228, AF106657, AL080148,  
AJ006417, AF008439, X83508, S78214, AC006112,  
AF061981, AR013797, L04852, X76228, X66862,  
AL137478, U02475, Y10936, AL110197, AL133112,  
AF016394, M27260, AL023657, AF125948, AL110225,  
AL137488, AL096751, Z35309, A18788, AF115410,  
E01573, E02319, I33391, AL049430, X89102,  
M85165, AL137479, AC002467, AL122049, AF118092,  
AL117416, U95114, X92070, AL137254, AL080074,

1427	HFIUZ10	876309	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 865 of SEQ ID NO:1427, b is an integer of 15 to 879, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1427, and where b is greater than or equal to a + 14.</p>	<p>AL050116, AF026008, AF039138, AF039137, AL049452, I32738, A23630, AF077051, AL110159, X63410, Y10655, S63521, AL049300, A86558, AF090943, X79812, AL110196, AF176651, X84990, AB007812, E01314, Z37987, AL133075, A07647, AF124728, AF036268, AL122045, I66342, AL050146, AL137485, AL133113, AL133619, AF102578, X96540, AR011880, AR053103, AC004878, Y10823, AI140058</p>
1428	HDPIE43	876322	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 507 of SEQ ID NO:1428, b is an integer of 15 to 521, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1428, and where b is greater than or equal to a + 14.</p>	<p>AA305011, M73047, X81323, U50194, A58393, M55169, A58395</p>
1429	HWLWR2 2	876326	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by</p>	<p>AW291224, AA027791, AI826645, AI970074, AI859242</p>

1430	HCRNJ16	876327	<p>the general formula of a-b, where a is any integer between 1 to 292 of SEQ ID NO:1429, b is an integer of 15 to 306, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1429, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 731 of SEQ ID NO:1430, b is an integer of 15 to 745, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1430, and where b is greater than or equal to a + 14.</p>	<p>AL135311, AA576997, N33567, AI239529, AI474303, AW242213, AA665114, AI003594, AA983676, AI832948, AA890557, AA251288</p>
1431	HPRAZ22	876330	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 917 of SEQ ID NO:1431, b is an integer of 15 to 931, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1431, and where b is greater than or equal to a + 14.</p>	<p>AA634082, AA663929, AW451471, AW451304, AA700185, AA780866, AA634109, AA974089, AI422746, AI422171, AW117387, AI352179, AI934740, T29406, AA581945, N51197, AI813713, AW274227, AA884819, AI418378, N71535, AI250177, AI479657, AI491976, R70651, AA864343, AW051516, C01561, AA926708, AA595570, AA913798, N47990, AA927688, AA465663, AW008553, AI735695, AI014415, AW086054, AA731995, AI631350, N68464, AA688150, N66020, AI422914, R68953, AW380659, AI831007, AI057418, R24219, AW401518, AI476095, AI492721, AA805457, AW392708, AA040547, N52290, AW362897, D57651, AI814638, R46574, R24220, AA769734, D56634, R74511, D57409, N91308, R78553, R77666, R46649, AI351922, R63467, AW090402, H80687, AI567650, R70873, T83969,</p>

1432	HWLQG81	876333	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 350 of SEQ ID NO:1432, b is an integer of 15 to 364, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1432, and where b is greater than or equal to a + 14.</p>	AA370839, R23184, R68106, H04104, R78403, R68836, D56912, D56797, F01477, R23183, N30106, D56629, R68150, AI699279, R70543, R82008, N45543, R48545, D56817, AI276541, AI908540, R77667, R78505, R63400, AA459439, N26395, R69802, M28697, M90727, M31932, I07269, J03619, M90735, M28696, M31933, X52473, M31934, M31935, X17653, L08108 AA832206, AA974370, W46279, AW196653, AI023212, AA464174, AI420451, AI948608, AI890342, AA114888, AW300598, AI129358, AA669095, AA504203, AA521314, AA252310, AA280044, AA165321, AI718165, AI765613, AI797687, AA877638, N69756, AI831132, AI027401, AI701050, AA863081, AI807828, Z40146, AA995204, T71333, AI935316, Z19443, AI918466, F00129, Z28882, D57019, AL047889, AW369458, AA743770, AL047888, AW025464, D54675, AW149925, AW302960, AL036802, AA504439, AI927755, AL041772, AW163823, AW162194, AI866608, AL036274, AL041562, AL119863, AW238730, AL045500, AI699865, AI909697, AI340519, AI537677, AL110306, AI433157, AI698391, AI929108, AW026882, AI620284, AL079963, AI254727, AA640779, AI349645, AA613907, AW051088, AA572758, AL038505, AI699011, AI590043, AW129264, AL037454, AW059828, AW269098, AW268251, AW161156, AI064830, AL039086, AW020693, AW268768, AW300782, AI349933, AL036403, AI340603, AI581033, AI923989, AL119828, AW082113, AW300889, AL119791, AI309401, AW172745, AL036396, AL048656, AI349598, AL041150, AW020397, AI589428, AI783504, AI284517, AW161579, AW198075, AI567351, AL047344, AI813914, AL080046, AW089572, AI610293, AI753683, AW074993, AL079960,
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	AL040169, AW268253, AI500659, AI950892, AI312152, AI815232, AI500523, AI468872, AW160916, AW162071, AI349937, AL036638, AI348897, AI345180, AW150578, AI625464, AW302965, AL047042, AI252414, AW080402, AI802542, AI633125, AW087445, AI868931, AI348901, AW071417, AI864836, AL036673, AW301300, AL037582, AL037602, R36271, AW161202, AI270183, AI521012, AI312428, AW023859, AL118620, AW163554, AL135022, AI702073, AL046931, AI610645, AI539771, AI349614, AL038605, AI343112, AW302992, Z99428, AI866770, AI473536, AI499963, AL080045, AI560012, AI366549, AL121014, AI567582, AI345735, AL043355, AI801325, AI815855, AL038779, AL119748, AL036980, AI889189, AL134830, AI890507, AW068845, AI612885, AA579618, AI636456, AI866820, AI564719, AL119049, AI358701, AI497733, AL121365, AA528822, AI754897, AI091468, AI500662, AI440263, AL040241, AI472536, AW022808, AI697324, AI251221, AA493647, AI538850, F37471, AW301409, AI884318, AI860783, AI624293, AI345688, AL036146, AL039716, AW074869, AI307543, AL047100, AI335426, AI348777, AW071362, AL037030, AI569583, AI475371, AI635492, AI349256, AW075207, AI673363, AI343037, AW403717, AI669864, AW020419, AW149236, AL036901, AI682841, AI859991, AL120695, AI613038, AA580663, AI568114, AL119399, AI537837, AI683395, AL040456, AL036240, AI536685, AI307604, AL036631, AI538716, AA641818, AC002350, AL096744, I48979, U35846, I89947, AL122050, I09499, I48978, Y16645, AL110196, AL117457, U87620, AF090903, Y11587, AF177401, AF090943, E07108, AL133075, AL050116,

AF090901, AL122093, AF100931, AL137550, M27260,  
AF090900, A08916, AL133606, AF078844, AL137538,  
A08910, AL049382, AF146568, AF090934, A65340,  
AL137271, AF183393, S78214, AL133565, A77033,  
A77035, AL133640, A08909, AL133016, A08913,  
AF113019, AL133557, I89931, AL050149, AF113013,  
AF090896, X70685, AF113691, AL137488, AF079765,  
AL133560, AF079763, AL137533, AF104032,  
AF113694, AF125949, AF017152, AF097996,  
AL049938, AL137557, AF031147, AF125948,  
AL050146, AL117435, U42766, I00734, AB019565,  
AL049300, AL049283, E05822, E00617, E00717,  
E00778, E12747, AL080124, AR013797, AF067728,  
AF087943, AL049452, AL110221, X63574, AL050277,  
AF113690, AL133080, I33392, U58996, AL122100,  
AL096720, E02221, AF091084, E02349, AL137548,  
AL137480, AL122110, AJ000937, AL049430,  
AL137459, L31396, AL137527, AL050393, L31397,  
AF106862, AR011880, AB016226, AL050024,  
AL117460, AL050108, E01614, E13364, A58524,  
A58523, AF017437, AF118064, A65341, AF118070,  
AL137478, I49625, AF111849, S68736, X72889,  
AL080060, AR038854, AF118090, AF113676,  
AL133113, AF057300, AF057299, AL080148,  
AF113699, AL050172, Z82022, AJ242859, X84990,  
AL080234, A03736, AF032666, A93016, AL137283,  
AL049466, E06743, AL049314, AF111851, AF158248,  
A08908, AF061943, AL133067, AL122098, AL137529,  
AL122121, AL137479, U72620, AF113689, X79812,  
Y11254, AR059958, AF106697, U80742, AL122123,  
A08912, A12297, AL137521, AF102578, AJ005690,  
E07361, X82434, AJ238278, AL023657, AL110225,  
AF113677, AF153205, AF026124, AL096751, U68387,  
AL137294, S61953, AF118094, AL117583, Y09972,  
A86558, A07647, AL080137, AB029065, AF067790,  
D83032, AF100781, X80340, AF210052, A18777,



1433	HOENU48	876334	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2579 of SEQ ID NO:1433, b is an integer of 15 to 2593, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1433, and where b is greater than or equal to a + 14.</p>	<p>AF159615, AL117649, AL080158, Z37987, AL050138, U91329, X83508, AL137526, X87582, U92068, AL117416, U96683, AL137658, AL133568, AF185576, AL117394, AL050155, A21103, A08911, AL133093, D16301, AL137292, AF081197, AL080074, AR020905, AL080159, I17544, AF090886, Y14314, U78525, X65873, AL110218, AF119337, E03348, AF126247, U95114, U67958, AF065135, AL137560, AL133665, AL137558, AL050092, AJ012755, AF081195, A15345, X81464, AL049464, AL117585, AL110222, AL050366, A18788, AL137463, AL137429, AR038969, X63162, AL110197, AF061795, AF151685</p>
1434	HOUDK26	876335	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1038 of</p>	<p>AA521311, AA521314, AW300598, AI051218, AI631949, AA669095, AW298550, AA278335, AI694270, AW339489, AI797687, AA464762, AI948608, AI807828, AA810071, AA804200, AI718165, AA662808, AA504439, AI129358, AI632884, AI215774, AI299255, AA452985, AI765613, AA114888, AI348428, AA114887, AA504203, AI129632, AI701050, AI890342, AA256836, AI023212, AI935316, AA974370, AA252310, AA831496, AA705444, D57415, AA464174, AA280044, Z44155, Z25261, D54675, AA165321, T71333, AI420451, AA973497, N69756, T71487, W46279, AA877638, AI027401, AA255623, AA863081, AW196653, H47827, AA832206, AA995204, AA252340, Z28882, W46278, T48511, Z40146, AI831132, AA743770, D57019, AA344612, T84473, N87679, AI918466, Z19443, F00129, D56990, AI351209, AL047889, AW369458, AL047888, AC002350, D82786, H20994, H45211, H45368, H40040, H45293, H45192, AA205743, T24020, T90417, H20955, R70326, AF075043, AC004755, AC005516, AC005519, AL049836, AL080243, AC007358, AC004106, AC008394, AC005234, AC007546, AC005089, AL031597, AL031056, AC003690, AC005523,</p>

1435	HODDG78	876340	SEQ ID NO:1434, b is an integer of 15 to 1052, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1434, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 651 of SEQ ID NO:1435, b is an integer of 15 to 665, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1435, and where b is greater than or equal to a + 14.	AC002316, AC004861, AC002472, H30375  AW247764, AA442668, AA491177, AW248120, AL048314, AA479828, AA421873, AW248094, H75462, Z42343, F06148, AA923747, F06007, AI445056, R14715, F13060, AR025386, X86779
1436	HAMFP80	876345	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1090 of SEQ ID NO:1436, b is an integer of 15 to 1104, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1436, and where b is greater than or equal to a + 14.	AI219740, AI478566, AI632246, AA279757, AA977612, AA716656, AA687260, AI801069, AA071046, AI985849, AW370598, AA630617, AW370599, AW370625, AA134295, AW390691, AI990289, AA134294, AA428452, AI143764, D30955, AW370620, AA352142, AA074442, T83462, AW071043, T79236, AI744728
1437	HWHQB10	876354	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 345 of	H40868

1438	H2LAB47	876361	SEQ ID NO:1437, b is an integer of 15 to 359, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1437, and where b is greater than or equal to a + 14.  Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 395 of SEQ ID NO:1438, b is an integer of 15 to 409, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1438, and where b is greater than or equal to a + 14.	AA307985, AL044985, AA361756, AA016093, AA133547, AA046950, AF126424, AF106065, AF076838, AL122068, AJ001642, AJ131295, AJ004977, AF017748, AF098534, AF085736, AF106066, AC004993, AF098533
1439	H1BAR28	876364	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 390 of SEQ ID NO:1439, b is an integer of 15 to 404, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1439, and where b is greater than or equal to a + 14.	AA355924, N83684, AA214701, H94179, AW298728, AI056829, AA278566, AA093069, T67190, AF092563
1440	HCEFA76	876370	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 338 of	AL079827, AA503895, AB002353

1441	HCQB131	876372	<p>SEQ ID NO:1440, b is an integer of 15 to 352, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1440, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 543 of SEQ ID NO:1441, b is an integer of 15 to 557, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1441, and where b is greater than or equal to a + 14.</p>	<p>AI491957, AA446825, Z42384, W86347, AC002064, T73581, T73682, T89320, T89957, R27248, R27450, R48643, H84547, H99963, N28347, N63131, N64745, N76150, AA047464, AA047398, AA086034, AA099567, AA099657, AA165569, AA169522, AA169441, AA173617, AA173616, AA169406, AA215775, AA251330, AA251391, AA258330, AA258494, AA258798, AA258704, AA258149, AA258122, AA419346, AA602860, AA622286, AA683139, AA683138, AA713685, AA743062, AA807661, AA825739, AA825993, AA828448, D78955, N87351, AA165525, AA210972, AA211395, AA416558, AA845854, AA971491, AA985073, AI023629, AI073499, AI090846, AI092089, AI093295, AI096814, Z41403, Z45751, AI302012, AI357671, AI367709, AI367710, AI201715, AI202745, AI445483, AI433348, AI478813, AI146981, AI151439, AI184769, AI658554, AI521058, AI537563, AI301471, AI634487</p>
1442	HTEGD78	876374	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 554 of SEQ ID NO:1442, b is an integer of 15 to 568, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1442, and where b is greater</p>	<p>AI811832, AI732557, AA151182, AI610370, AI672898, AI874058, AI758608, AL079276</p>

1443	HCYBN59	876376	<p>than or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 640 of SEQ ID NO:1443, b is an integer of 15 to 654, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1443, and where b is greater than or equal to <math>a + 14</math>.</p>	AA305677, D80212, D80248, D80268, C14331, D57483, D80227, D59927, D80269, D80133, D59619, D80210, D80240, D80378, D80166, D80219, D81026, D80439, C14389, D80157, D81030, C14429, D80522, C15076, AA305409, AW178983, D80195, D51060, D80022, D80366, D59859, D59502, D51423, D51799, D80253, D80045, D59467, C14014, D58283, D80188, D80391, D80164, D59787, D59275, D80043, AA514186, D59889, D59610, D80193, D80196, D80251, D51022, D50979, D80024, D50995, AW377671, AA305578, D59373, D80038, D80302, AA514188, D80241, AW360811, D80247, AW177440, AW178893, AW352163, D51759, AW375405, T03269, C75259, D80258, AW178906, AW179328, AW366296, C05695, AW360844, AW360817, AW375406, D51103, AW378534, AW179332, AW377672, AW179023, AW178905, AW377676, AW378532, C06015, D80132, D80134, AW177501, D59653, AW177511, D80949, D59627, AW352171, AA809122, AW352170, AW177731, AW178907, AW378528, D59503, AW178762, AW179019, AW179024, D58253, D51250, AW176467, AW367967, AW360841, AW177505, AW179020, T48593, AW178775, AW360834, AW178909, AW177456, AW369651, AW352158, AW179329, AW178980, AW178914, AW177733, AW178908, AW178754, AW179018, D80014, D80064, AI557751, AW352117, AW178774, D45260, AW352120, D51213, AW179004, C03092, D51079, F13647, AW179012, D80168, AW378525, C14344, D59695, AW378543, AI525923, AW352174, AW177728, H67854, N66429, AW179009, D80228, D81111, AW367950, AW178911, AW177722, AI910186, AW378540, H67866, C14077, T11417, AW178781, AI905856, C14407, AW177508, D58246, AI525917, AW360855, C14227, D58101, D51221, T03116, AW178986, AW177497, T02974, Z21582, AI535850,
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			D59317, D59474, AW177723, D45273, C14973, AI525920, AW378533, AA514184, AI535959, C14957, AW177734, D60010, AI535686, C14298, AI557774, D59551, AI525235, C14046, T03048, D60214, AI525215, AI525227, AI525912, AW378539, D51097, AI525242, AA285331, D50981, AW179011, D51053, AW378542, AI525925, AI525222, C05763, C13958, C16955, Z33452, Z30160, AA305720, A62298, A84916, AR018138, AR008278, A62300, A82595, AB028859, AJ132110, AF058696, Y17188, X67155, D34614, A67220, A45456, AR060385, AB002449, D26022, A25909, A94995, Y12724, D89785, A78862, A30438, AR008443, I50126, I50132, I50128, I50133, D88547, AR066488, AR016514, AR060138, X82626, A26615, AR052274, A43192, A43190, AR038669, I82448, I14842, Y09669, AR066487, Y17187, X68127, AR025207, AR054175, D50010, A63261, AR066490, AR008277, AR008281, I18367, U46128, AR008408, AR062872, AR016691, AR016690, A70867, A64136, A68321, D13509, AR060133, AB012117, I79511, U79457, AF123263, AR032065, T52855, T56234, T65208, R26874, R49147, R49147, R56838, R63286, R68208, R68209, R76931, H08236, N21262, N23372, N32910, N42052, N47538, N63310, N63321, W00634, W46981, W47082, AA043968, AA043955, AA046699, AA057059, AA058538, AA102644, AA131696, AA131540, AA186895, AA188518, AA494518, AA632935, AA714553, AA741529, AA767851, AA808213, AA812138, AA847682, AA938741, AA995568, AI000554, W00650, AA477265, AA779560, AA868920, AA969270, AA936409, AI023812, AI093513, T25142, F02925, T52854, F09719, AI274698, AI285351, AI346806, AI469317, AI478311, AI540692, AI478825, AI144017, AI160890, AI625377, AI610977, AI291591, AA305023, AI352123, AI245481, AI909228, AI915162
1444	HCYBC31	876379	Preferably excluded from the

1445	HCQBM44	876380	<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 885 of SEQ ID NO:1444, b is an integer of 15 to 899, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1444, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 351 of SEQ ID NO:1445, b is an integer of 15 to 365, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1445, and where b is greater than or equal to a + 14.</p>	<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 885 of SEQ ID NO:1444, b is an integer of 15 to 899, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1444, and where b is greater than or equal to a + 14.</p>	
1446	HKCSP75	876381	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 362 of SEQ ID NO:1446, b is an integer of 15 to 376, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1446, and where b is greater than or equal to a + 14.</p>	<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 362 of SEQ ID NO:1446, b is an integer of 15 to 376, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1446, and where b is greater than or equal to a + 14.</p>	
1447	HKCSP84	876382	Preferably excluded from the		AC000402, AC002322

1448	HPMFF45	876383	present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 289 of SEQ ID NO:1447, b is an integer of 15 to 303, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1447, and where b is greater than or equal to a + 14.	R52326, AL110125
1449	HE2CT52	876385	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 511 of SEQ ID NO:1448, b is an integer of 15 to 525, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1448, and where b is greater than or equal to a + 14.	H74219, AA315682, AA904381
1450	HTNBJ76	876386	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 605 of SEQ ID NO:1449, b is an integer of 15 to 619, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1449, and where b is greater than or equal to a + 14.	AW083135, AA808057, A1745495, AA599616, T36219,



		<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 302 of SEQ ID NO:1450, b is an integer of 15 to 316, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1450, and where b is greater than or equal to a + 14.</p>	<p>AI918013, AA937922, AI591300, AI868123, AI041990, AA342254, T33591, D44838, F16827, AI360911, R11202, D25779, AI521589, AA076707, AI978792, AW068394, AA347093, AA323085, AA359192, AI446474, F17700, AL045709, AA077776, AI633427, AA533408, AA558298, AA835710, AA330573, R87547, AI151261, AI370475, AA297968, AI699060, AI114477, T92957, AI952780, AA972238, AA857296, AA663306, W23546, AW268277, AA643261, AI251111, AL042113, F26719, AA825357, AI132963, T47739, AI538812, AA548087, AA425924, AI890385, AA485716, AI538540, AA828762, H05073, AW419262, AW193493, AA527730, AI865988, T78484, AA468051, AW272763, AI049996, AI801141, AI913324, N84161, R82388, H82895, AW451360, AI053786, AI148927, AI445592, AI042342, AA487219, AA384039, AA572960, AL046782, AA487079, AI754013, AA492313, AI923011, C13960, AW271904, AI753951, AA634209, AI755085, AA614010, AA235575, AW238016, AA467988, AI791150, AI623899, AA063139, AI114752, AA362395, AW407340, AA935377, AI859946, H73174, AA775049, AA581914, AI634323, AI470956, AW419081, AI979005, AI671035, AI952900, AA708678, AA311071, AA814510, AA743989, AI696901, AI754923, AA663701, AA357307, AI859834, T52783, T65812, AI755236, AI475332, AL120976, AI915081, AA569182, AA664135, AA831904, AA526656, AW189278, AA569743, AA632845, AA714956, AA664789, AA525209, AA507625, AI252506, Z36239, AI241705, AA776552, H55878, T80500, AW176024, AI261913, AI275742, AL037910, AA829033, AC004084, AC004253, AC018767, AC006120, L78810, AC007055, AL031055, AC002400, U62317, AC005288, AL035587, AP000355, AC005341, AL021391, AL049780, AC005209, AL035455, AL034379,</p>
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	AL035450, AL121655, U76377, AF029750, Z82172, AL109827, AC005184, AC005778, AC006958, AC005071, AL031257, AC009286, AC006132, Z82214, AL035687, AC006146, AC004993, AL031295, AL049611, AF001549, AC006115, AC005670, Z98257, AC004815, AL121748, AL121603, Z85986, AL034421, AC005015, Z49258, AC007860, Z84572, AF000030, Z97200, AC002073, AL031767, AC004837, AC005666, AF196969, AC005339, AC005011, AL035458, AF111169, AC004797, AC005800, AL031846, AL121652, AP000459, AL024498, AC006160, AC002045, AC002472, AC002558, AC004485, AC005225, AF190465, AP000112, AC006501, AC005624, AC005081, AC005726, AC006026, AP000513, AC005911, AL049552, AF045555, Z99943, AL031659, AL050307, Z97630, AL031054, AC004821, AC007406, AP000140, AC005306, AL049557, AC005088, AL109967, AC007437, AP000036, AC007536, AC007899, AC007114, AF042090, AC005480, AC006547, AC004386, AC004876, AC005251, AC003041, AL022316, AC005378, AL080242, Z85987, AC006965, AC007021, AC003104, AF134726, AC006013, AC006064, AL096774, AB020866, AP000133, AP000211, AC006049, AF064863, AC007993, AL031311, AF015262, AL035697, AF205588, AC005231, AC007151, AL034547, AC007488, L44140, AL021546, AC006299, AF146367, Z98036, AP000144, AL031282, Z99128, AF053356, AL133243, AL035451, AC007283, AC002996, AC005082, AC010582, AL031589, AL034420, AP001054, AL132985, AL034451, AC006116, AF118808, AC006380, AC007298, AP000065, AC002316, AP000088, AC005786, AC000003, AC005598, AC005663, AC006978, AL031733, AC004050, AC002538, AC005284, AP000216, Z93241, AC007227, AL049845, AC004849,

1451	HE9ND38	876387	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 351 of SEQ ID NO:1451, b is an integer of 15 to 365, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1451, and where b is greater than or equal to a + 14.</p>	<p>AP000474, AC006344, Z75744, AC007390, AL049795, AL022721, U91321, AC005808, AC004448, AC010197, AP000517, AL031291, AL021808, AC005366, AL031681, AC003982, AC005874, AF134471, AL132712, AC004647, AL078593, AC007565, AC005751, AL031594, Z82206, AL031286, AP000959, AC004000, AC007510, AC006530, AC005280, AC007649, AP000230, AC005971, AC006480, AL022165, AC002364, AL132992, AC006323, AC004020, AC005821, AF006501, U63721, AC005799, AL050312, AF038458, AL021397, U95742, AL031121, AF124523, AC004227, AC003101, AL022323, AF019413, AJ229043, AJ003147, AP001037, AC006285, AC009464, AC006039, AC005048, AC002377, AP000692, AC005245, AC006597, AC002365, AL049643, AL050318, AC005057, AC002115, AC007221, AC004814, AC004111, AL035462</p>
1452	HPIAK40	876395	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 756 of SEQ ID NO:1452, b is an integer of</p>	<p>AA334551, AA307537, AF002996</p> <p>AI902815, AI910057, AI902293, AR062079, E05133, A14565, I19407, E05330, E05331, E05332, A27627, E05329, E03742, E06073, I19413, I19414, E15669, AR028747, A58083, E17345, I12374, AR062080, E17343, E17344, E05159, E05147, E05139, E05134, I57961, E05162, E01336, I12376, E17339, E17340, E17341, E17342, A37179, E05144, E05135, I21469,</p>

1453	HHPGD10	876397	<p>15 to 770, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1452, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 548 of SEQ ID NO:1453, b is an integer of 15 to 562, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1453, and where b is greater than or equal to a + 14.</p>	<p>E05152, E05153, I21461, I90026, E05143, A14547, I21454, I31067</p> <p>AW361614, AB023235</p>
1454	HCQB147	876398	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1753 of SEQ ID NO:1454, b is an integer of 15 to 1767, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1454, and where b is greater than or equal to a + 14.</p>	<p>AA527356, AI093930, AI635756, AW150892, AW340249, AI683004, AA574295, AA578334</p>
1455	HE8DW67	876399	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 386 of SEQ ID NO:1455, b is an integer of</p>	<p>AA308646</p>

1456	HONAH83	876400	<p>15 to 400, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1455, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 998 of SEQ ID NO:1456, b is an integer of 15 to 1012, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1456, and where b is greater than or equal to a + 14.</p>	<p>N44636, AW292774, AA398365, H29990, R92869, AA403200, N44265, AA362919, AI914181</p>
1457	HHGCW95	876401	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 623 of SEQ ID NO:1457, b is an integer of 15 to 637, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1457, and where b is greater than or equal to a + 14.</p>	<p>AA573757, AA161293, AA524449, AI742214, AA622626, W96506, AI476586, W96473, AA570007, AI216739, AW168439, T06973, AI268257, AI702993, AA502262, AI911816, AI796804, AA480659, AA552367, AI709265, AI809403, AI445236, AA552072</p>
1458	HCYBI75	876402	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 528 of SEQ ID NO:1458, b is an integer of</p>	<p>AA305438, AA056382, AW188096, AA308744, AI702438, C14389, D59927, C14331, D80022, D50995, D80166, D80212, D80391, AW178983, D59787, D59619, D80210, D80240, D80045, D80268, D58283, D81030, D80196, D59467, D51022, D59859, D51799, D80227, D80195, D51423, D80164, D59275, D80253, D80043, D59502, AA305409, D80219,</p>

<p>15 to 542, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1458, and where b is greater than or equal to a + 14.</p>	<p>D80269, D80248, D81026, D80366, D80188, D50979, D80522, C14429, C15076, D59610, AA305578, D51060, D80193, D57483, D80038, C14014, D59889, D80133, D80024, AA514188, AA514186, D80439, D80378, AW360811, AW177440, D80247, D80241, D80302, D80251, AW178893, T03269, AW377671, AW375405, D80157, AW178906, AW179328, AW366296, C75259, AW360844, AW360817, AW375406, D51103, AW378534, D51759, AW179332, AW377672, AI139921, AW179023, AA056479, AW178905, AW378532, C06015, AW352170, AW177501, AW177511, D51250, C05695, D59373, D80132, AW352171, AW377676, AW177731, AW178907, T48593, AW378528, AW178762, AW179019, AW179024, D80134, D59653, D58253, AW176467, D59627, AW367967, AW177505, AW360841, AW369651, AW179020, AW178775, AW178909, AW177456, AW360834, AW179329, AW178980, AW178914, AW177733, AW178908, AW178754, AW179018, AW352158, AW352117, D45260, AW178774, D58101, D59503, F13647, AW352120, AW179004, AW179012, AW378525, AW352163, T11417, D80949, H67854, D80168, C03092, AW378543, AW352174, H67866, AW177728, AW367950, AA809122, AW179009, AW178911, C14344, AW177722, D51213, AW378540, AI910186, D80228, AI525923, D80064, AW178781, D80258, AI905856, C14227, D45273, C14973, C14046, T03116, AI525917, D58246, D81111, D59317, D80014, AA514184, AC004510, AC002384, U95626, AC006013, U88897, AC003013, AL050339, AC005145, AC004768, AL139054, AC005090, AC002530, AC006364, AC007207, AL121879, Z56740, AF058696, A84916, A62300, A62298, AB028859, AJ132110, AR018138, AR008278, A82595, D26022, AR060385, AB002449, X67155, A25909, AC004791, Y17188, A94995, Y12724, A67220, D89785, A78862, D34614, AR008443, I50126, I50132, I50128,</p>
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1459	HCRMK04	876404	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 517 of SEQ ID NO:1459, b is an integer of 15 to 531, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1459, and where b is greater than or equal to a + 14.</p>	<p>I50133, A43192, A43190, AR060138, D88547, AR066488, AR016514, A45456, I14842, A26615, AR052274, I82448, AR038669, X82626, Y09669</p> <p>AI057537, AI862687, AI686128, AW002455, AA875951, AI783596, AI050998, AI273307, AI374905, AI224513, AA460225, AI042000, AI610450, AI829581, AA775736, AI364904, AI698790, AA844090, R71519, AI860091, AI523843, AI767012, AI473515, AI350561, AW188551, AI119399, Z99396, AI119324, AI119457, AI119443, AL042544, AL134524, AL036418, AL038837, AW392670, AL037051, AL036725, AA631969, AW372827, AL039074, AW384394, AL119497, AL119418, AL036858, AL134920, AW363220, AL036924, AL119483, U46341, AL119319, AL038509, AL039564, AL039085, AL119396, AL039156, AL039108, AL039109, AL039128, AL119484, AL119363, AL119341, AL119391, AL119355, AL119335, U46350, AL119522, U46349, U46351, AL119496, AL037094, AL037526, AL039659, AL036196, AL036190, AL037639, AL042965, AL038531, U46347, AL042614, AL037085, AL119444, AL036767, U46346, AL037082, AL042975, AL119464, AL037205, AL119488, AL134533, AL119439, AL036268, AL039625, AL039648, AL045337, AL038520, AL134538, AL036238, AL134518, AL042984, U46345, AL038447, AL042909, AL039678, AL039629, AL134527, AL042433, AL039386, AL042551, AL134531, AL039423, AL037077, AL042970, AL043029, AL042450, AL043011, AL043019, AL037615, AL038851, AL042542, AL036998, AL036733, AL037178, AL043003, AL036765, AL036719, AL037027, AL039410, AL036679, AL036774, AL037021, AL036191, AR060234, AR066494, A81671, AR023813, AR064707, AR069079, AB026436, AR054110</p>
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1460	H2CBF13	876405	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 593 of SEQ ID NO:1460, b is an integer of 15 to 607, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1460, and where b is greater than or equal to a + 14.</p>	AA307313, AA312913, AI203434
1461	HKCSO44	876408	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 107 of SEQ ID NO:1461, b is an integer of 15 to 121, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1461, and where b is greater than or equal to a + 14.</p>	
1462	HWLKU83	876409	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 692 of SEQ ID NO:1462, b is an integer of 15 to 706, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1462, and where b is greater than or equal to a + 14.</p>	AW014464, AA693558, N74561, AI024015, AA332850



1463	HE9RM22	876418	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1751 of SEQ ID NO:1463, b is an integer of 15 to 1765, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1463, and where b is greater than or equal to a + 14.</p>	<p>AI492422, AI357898, AW296940, AA931635, AW296456, AI038836, AI265919, D59291, AA694009, AA700680, H06163, H66881, R23681, T86478, T86479, H81425, AI016343, Z38898, T16577, Z42746, Z42275, T89377</p>
1464	HCRPQ93	876419	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 461 of SEQ ID NO:1464, b is an integer of 15 to 475, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1464, and where b is greater than or equal to a + 14.</p>	
1465	HPDDL36	876420	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 184 of SEQ ID NO:1465, b is an integer of 15 to 198, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1465, and where b is greater than or equal to a + 14.</p>	AA366524

1466	H2CBM09	876422	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 500 of SEQ ID NO:1466, b is an integer of 15 to 514, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1466, and where b is greater than or equal to a + 14.</p>	AA307727, AL121460, Z56847, Z57345
1467	HKCAA10	876425	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 635 of SEQ ID NO:1467, b is an integer of 15 to 649, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1467, and where b is greater than or equal to a + 14.</p>	AA192455, AW294111, AA707196, AI924499
1468	H2CB125	876426	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 465 of SEQ ID NO:1468, b is an integer of 15 to 479, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1468, and where b is greater than or equal to a + 14.</p>	AA307505, AA360083

1469	HKISB80	876427	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 385 of SEQ ID NO:1469, b is an integer of 15 to 399, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1469, and where b is greater than or equal to a + 14.	AA718982
1470	H2CBE84	876428	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 446 of SEQ ID NO:1470, b is an integer of 15 to 460, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1470, and where b is greater than or equal to a + 14.	AA307365, AW009512, AI609285, AI659851, AA301898, AI671626, AI818892, AW025713, AA490857, R40307, AA700491, AI273067, AA834371, AI368173, AW316631, C05075, AA480122, AA348046, D59610, AA089704, D80241, D59467, Z21582, D80212, D80045, D59859, D51423, D80188, D80166, D58283, D81030, D59619, D80210, D51799, D80240, D80253, D59889, D80195, D80038, D80022, D80219, D80043, D80391, D59275, D57483, D59787, D80227, D59502, D80366, D80196, D50995, C14331, D80164, D59927, D80269, D50979, D80024, D80193, D80378, C14389, C14014, C15076, AA305409, D51060, C75259, T03269, D58253, C04935, AW178893, F13647, D80134, D59695, D81026, D80268, D51250, D80522, D51022, D80949, AW179328, AW352158, AW378532, AW177440, AA305578, D80168, AW369651, D80248, D51079, D81111, D80251, C14227, D52291, AW178762, AA514188, C14298, D80133, AA514186, C14407, AW360811, AI557751, AW378540, D51097, C05695, AW375405, AW360834, AA285331, AW377671, D80132, AW366296, AW360817, AW375406, AW378534, AW179332, AW377672, AW179023, D80439, AW178905, AW179024, D80302, D59373, AW179020, AW177456, AW352171, AW377676, AW178906, AW352170

1471	HSEBD08	876431	<p>AW177731, AW178907, AW178754, AW179019, D80247, D58101, D80014, AW179004, AW179012, D51759, AW178980, AW177733, AW378528, AW178908, AW179018, T11417, H67866, T03116, D80157, AW178914, AW178781, AW378525, D51103, D59627, C06015, AI557774, AW352120, AW177728, AW178774, AW178911, AW378543, AW352163, D80258, D59653, D45260, T02974, D59503, D51213, T48593, H67854, AI525235, H67858, C03092, AW378533, AA809122, AW367950, D80064, AW178986, AI525923, D58246, C14957, D59551, AA514184, AI525917, D50981, D45273, D59474, C14344, D51221, D59317, D80228, C14973, AI525920, C14046, D60010, AI535686, AI525912, AI525227, AI525215, AC002036, A62298, AJ132110, A84916, A62300, AR018138, D88547, D34614, X67155, Y17188, D89785, D26022, A25909, A67220, A78862, AR008278, A45456, X82626, AF058696, AB028859, AR025207, Y12724, AB012117, X68127, AR066482, A85396, A82595, A44171, A85477, A94995, I19525, A86792, U87250, AR060385, X93549, AB002449, AR008443, AR016808, AR064240, I50126, I50132, I50128, I50133, A30438, AR066488, AR016514, AR060138, A26615, AR052274, Y09669, A43192, A43190, AR038669, I14842, AR054175, AR066487, I18367, AF135125, Y17187, A63261, D88507, AR008277, AR008281, D50010, A70867, AR062872, AR016691, AR016690, U46128, AR008408</p> <p>AA781174, AW242810, AI888669, AI572847, AW301246, AA773636, AA053054, AA112389, AA053397, AA699864, AA112388, AA974581, AI524767, AW377081, AW016549, D62897, AA954644, AA169505, AW377047, AA092662, AW362046, AA629163, S72869</p>
			<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1993 of SEQ ID NO:1471, b is an integer of 15 to 2007, where both a and b</p>

1472	HPMFM22	876432	correspond to the positions of nucleotide residues shown in SEQ ID NO:1471, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 386 of SEQ ID NO:1472, b is an integer of 15 to 400, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1472, and where b is greater than or equal to a + 14.	R42236, AI268027	
1473	HDHEB14	876435	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1264 of SEQ ID NO:1473, b is an integer of 15 to 1278, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1473, and where b is greater than or equal to a + 14.	AI913961, AA621915, AI768685, AW009951	
1474	HAIDH43	876436	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 461 of SEQ ID NO:1474, b is an integer of 15 to 475, where both a and b	AI744435, AA725348, AI910436, AA771917, AW275132, AI915670, AI217575, AA772389	

1475	HJAAAL27	876440	correspond to the positions of nucleotide residues shown in SEQ ID NO:1474, and where b is greater than or equal to a + 14.	AA354378, AA397949, AA007514
1476	HA5AB14	876441	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 428 of SEQ ID NO:1475, b is an integer of 15 to 442, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1475, and where b is greater than or equal to a + 14.	AI381990, AA5233925, AI381991, AI673419, AA535262, AI990950, AW369662, AI272934, AI150565, AW316722, AI142707, AW338227, AA487031, AA486591, AI968726, AA614168, AA632457, AA122026, AA482527, AA512956, AA658276, AA541675, AA451748, AI677810, AI587642, N64192, AI250993, AA424310, AI905464, AA229168, AA122025, AL035541
1477	HWLNS47	876444	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 843 of SEQ ID NO:1477, b is an integer of 15 to 857, where both a and b	AA279461, R59258, T80331, Z45041, F13132, T75390, AA099543, AA669197, H08922, H57648, AW304022, AA304745, W79474, AW118919, R59760, W86555, R18710, AF083033, AR028451, AF072860, Z84477

1478	HE8UJ03	876447	correspond to the positions of nucleotide residues shown in SEQ ID NO:1477, and where b is greater than or equal to a + 14.  Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2757 of SEQ ID NO:1478, b is an integer of 15 to 2771, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1478, and where b is greater than or equal to a + 14.	AW340972, AI763378, AI745530, AI400359, AA634799, AW373755, AA406542, AW008882, AI379597, AW373615, AI858439, AI380423, AI628029, AW074041, AI538874, AW189012, AA857364, D82303, AA224830, AI132792, AA224831, AA524982, AW364047, AI678604, AI142902, AA133068, D82445, H39906, AA593133, AA644624, AA888921, AA411736, AI992380, AI679729, AA904079, AA494400, AA577041, AI282492, AI640743, AW074288, AI535647, AA551421, AA336073, AA505483, AI469669, AI284099, AI284098, AI201463, AI872908, AI610272, AA829570, AI290109, AI903549, AI903561, AI611723, T11347, AI903513, AA337475, AI567336, AI925611, AW389340
1479	HDTLK03	876448	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2051 of SEQ ID NO:1479, b is an integer of 15 to 2065, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1479, and where b is greater than or equal to a + 14.	AA442527, AW262626, AW391549, AW304931, AI669606, AI858160, AA085664, AA659697, AI632828, AA134338, AA984772, N22162, AA085613, AW197240, AW129348, W26560, AI311237, AI336661, AI343171, AW274348, AA581646, AI344929, AA935005, AI017643, AI335437, AA847210, AA730055, AW268074, AW089030, AI382955, AA662650, AW193002, AA648105, AI933533, AA782687, AA389680, AA334191, AW370221, AA373813, AI914719, N71529, AA186588, AW363311, AA373153, AA120820, D20893, AI557148, T24490, AA249060, AI741448, W73136, W73116, AI251367, AF086334
1480	HMTBC69	876451	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by	D50810, U62768, U62769, U32990, U76997, AJ131025, AJ131026, AJ131027, AJ131028

1481	HMUBP81	876452	<p>the general formula of a-b, where a is any integer between 1 to 706 of SEQ ID NO:1480, b is an integer of 15 to 720, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1480, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1153 of SEQ ID NO:1481, b is an integer of 15 to 1167, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1481, and where b is greater than or equal to a + 14.</p>	<p>AI279547, AI083565, AI804064, AA252212, AA306506, AI083894, AW183913, AI288218, AA973053, AA252213, AI440455, N23315, AI300175, AW152434, AI864289, AI217669, N32475, AA825339, AI564974, AA765563, N23439, AA234876, AA235303, T47445, AA311785, AI147554, AA738131, AI560760, AA993026, T90472, AA573442, AI279529, AA193637, H11688, AI937674, T47444, AA740441, D81882, H96821, T83136, AI219090, AA573498, AA371301, AA809694, AA193600, AA766413, AA258658, AA258659, C01339, AL008729</p>
1482	HAPOT58	876458	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2115 of SEQ ID NO:1482, b is an integer of 15 to 2129, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1482, and where b is greater than or equal to a + 14.</p>	<p>AL037788, AI686047, AI753484, AI636777, AI861877, AI935355, AI144560, AI192999, AI806026, AA081086, AI140416, N52261, AI984946, AI126835, AI375382, N31999, AI431922, AI000687, AA281546, AI354844, AW368199, AI806020, AI192995, AA432212, AI796776, AI765555, AI436119, N62465, AA416953, AI392798, AA504837, AA993835, AI942228, N74643, AA962052, N31979, H80204, AI340563, AW025654, W95677, AI373352, AA928965, AA505730, AA598619, AA281547, AA455805, AI373515, AA919147, AI879179, AI656682, AI350119, AI143974, AA283875, AI810436, AI761126, AA456624, AA931610, AI634994, AI149059, H58033, AA282093, AI762032, AI867892, W39405, W15216, AA456424, AI493979, W26521, AI418808, W95891, AA470851, N92893,</p>



1483	HCFLR18	876459	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 519 of SEQ ID NO:1483, b is an integer of 15 to 533, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1483, and where b is greater than or equal to a + 14.</p>	<p>H81006, AA136357, AA359333, N50738, AI309586, AA783008, AW293385, AA373138, AW363229, AI919006, T81361, W95965, AA283984, AA371258, AI589997, AA605260, AA370986, AI690377, AA359446, W73659, H78829, AA113788, AI761221, AI469943, AA609846, AI864350, W25612, R24652, AA360514, AI907228, AA831054, AA355628, H78428, AI473940, AA291183, AA745877, AA136269, T24969, AI693730, AA706077, N83393, AA070852, AI905829, AI587625, N88059, AW363223, AI559993, AA526788, AI216608, AW371352, AI634388, N79184, AW363222, AA594328, AA400847, AI209205, AA393670, H83189, AF161432</p>
1484	HDPAA38	876464	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 887 of SEQ ID NO:1484, b is an integer of 15 to 901, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1484, and where b is greater</p>	<p>AA873176, AA9311378, AI218111, AI014843, AA379509, AL021155, AC004663, AC005379, AL096702, AF187320, AL117258, U95740, AC004797, Z95704, AC004636, AC005071, AP000952</p>

1485	HCYBM66	876465	<p>than or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 768 of SEQ ID NO:1485, <math>b</math> is an integer of 15 to 782, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:1485, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	AA116082, AA305687, C14014, D80269, D80227, AA809122, AA305409, C14389, D80391, D59787, D80196, D58283, D59859, D80022, C14331, D80166, D80195, D59467, D51423, D59619, D80210, D51799, D80164, D59275, D80240, D81030, D80253, D80043, D59502, D80212, D80188, C15076, D80219, D59927, D57483, D80366, D80038, D50979, D59889, D80193, D50995, D80024, D59610, D80378, H67854, T03269, C14429, AW178893, D80241, D80045, AW179328, D51060, AW177440, D51022, C75259, AW378532, AW369651, AA305578, AW178775, AW178762, D51250, AW352158, D80134, AI910186, D80251, D81026, D80248, H67866, AW177501, AW177511, AA514188, AW360811, F13647, D80522, C14227, D58253, AW352117, AA514186, AI905856, D80133, AW176467, AW375405, AW352163, D80168, AW377671, AW377676, AW360834, AW366296, C05695, AW352171, AW360844, D81111, AW360817, AW375406, C14298, AW378534, AW179332, AW378540, AW377672, AW179023, AW178905, D80064, D80268, C14407, D80132, AW352174, AW178906, AW352170, AW177731, AW178907, AW179019, AW179024, D80439, U91321 AC008122, AL021808, AC007649
1486	HPWAY46	876469	<p>preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 877 of SEQ ID NO:1486, <math>b</math> is an integer of 15 to 891, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:1486, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	
1487	HLTAH77	876470	<p>Preferably excluded from the</p>	AI359524, AW003850, AI089719, AI359474,

1488	HWLXX39	876471	present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1167 of SEQ ID NO:1487, b is an integer of 15 to 1181, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1487, and where b is greater than or equal to a + 14.	AI652055, AI948841, AI824819, R87348, F13369, T77492, Z43232, N50592, F11622, AA360610, F08357, AF035282
			Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 491 of SEQ ID NO:1488, b is an integer of 15 to 505, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1488, and where b is greater than or equal to a + 14.	AI879483, AA553761, AW363300, AW162358
1489	HPTWGS85	876472	present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 637 of SEQ ID NO:1489, b is an integer of 15 to 651, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1489, and where b is greater than or equal to a + 14.	AI652564, Y17108, Z92544, Y17258
1490	HEGBS09	876473	Preferably excluded from the	AL120741, AA573741, AW409804, AA191552, W93042,

			present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2954 of SEQ ID NO:1490, b is an integer of 15 to 2968, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1490, and where b is greater than or equal to a + 14.	AW402618, AW409704, AA496304, AW073345, AW300845, AA744892, N39760, AW176264, AI498051, AA419262, AA932846, AA632390, AA504894, AI564499, AI128977, AA737814, AA419313, AA565758, N26317, AW291428, AA533063, AI375164, AA662704, AA935484, AA128486, AI266104, N32937, N42608, AA307525, AI272853, AI354318, AA565783, N35109, AA191421, AI091816, W24942, N62754, AA113164, AI139914, R35445, AI358925, AI524297, AA411740, AW169734, AA342234, AA864231, AI219732, R75982, AA506884, AA868134, N95815, AA952966, AA406562, AA422127, AI277114, AA568586, AI307129, AA552501, AA325046, R80092, AA296682, AA075972, AI660916, AA877488, T48678, R25740, T78250, AL079578, AA504946, AA923223, R76813, R27494, AA348004, AA694309, AI538662, H04698, AA337541, AA356674, T48679, AA738377, AA368983, AA074378, AA809882, AA588403, AI672899, T78083, N79702, R25658, AI202481, AA311735, AA112425, R27510, R32527, R28609, AA129797, R25647, AI364021, AA578870, AI864211, AL079579, AA665375, R79889, AA355436, R34256, AA368982, AA348005, AA327401, N43853, AA937676, AA876470, AA235504, AW166979, AA548792, AA337180, AI520916, AI684053, AA054425, AI866770, AA878790, AI890907, AI348854, AI608932, AW001426, AI358701, AI680498, AI554343, AI620639, AL038445, AI961589, AI758437, AA911767, AI611348, AW022682, AW131288, AA603709, AI288285, AI344935, AI310575, AL037582, AL037602, AI340533, AL042191, AI349645, AW268253, AI702301, AI345253, AW083175, AI349937, AI621209, AI345026, AI559531, AI554485, AW150804, AI340627, AI963846, AW303089, AI859429, AI335235, AA908294, AW105601, AI497733,
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	AI307569, AI340511, AI263331, AL036980, AI559632, AI334930, AW004896, AL036904, AI345739, AI340659, AI343091, AI251221, AW074869, AI932638, AI247193, AI690813, AI634224, AW268072, AI335208, AW089275, AW302992, AA983883, AI872423, AI500588, AW169604, AW079336, AW026882, AI815232, AI310582, AW074993, AW129106, AI445131, AI335426, AI349957, AI348777, AW301300, AL041150, AW075207, AI312152, AI343037, AI310940, AI470293, AI889148, AW152469, AI690411, AI349226, AI345005, AI348879, AW075084, AI886206, AW058233, AI349614, AI343112, AW193134, AI307543, AI307210, AI312156, AI307708, AI349598, AW302988, AI859733, AI349256, AW167222, AI313320, AI345735, AI801460, AI620284, AW023338, AI432969, AW072588, AI307520, AW088805, AI249323, AI869367, AI334884, AW071412, AI207454, AI312325, AI343140, AI349971, AW089689, AW081797, AI783504, U49908, M30514, E02349, I48978, AL117435, X84990, AF118070, AF113699, AL049464, AL050277, X83508, AL049314, I89947, A08916, I03321, A08913, AJ238278, A08910, A08909, AF090943, AR029490, X63574, I89931, A08908, AL137521, AL133568, I49625, AL050393, AJ012755, AR038854, AF028823, AL133557, U49434, AR011880, AR038969, AL133016, A08912, I48979, X96540, AF113694, AF113690, AL080127, AL023657, AF158248, A18777, AF079763, AL117457, E02221, X53587, AF090896, AF118094, AL049382, AF106862, AF113677, A90832, AL137550, AL117432, AL110222, AL137292, E04233, U58996, AB007812, AF017437, AF100931, AF118090, I42402, AF026124, AL050116, AL050092, U35846, AF008439, AL050172, Y10080, AL110197, AF111849, AL117649,

1491	HERAM35	876474	Preferably excluded from the	<p>AF090900, AF125949, S78214, AF061943, I26207, X82434, U67958, AL117416, E08631, U78525, AF104032, S75997, AF091084, AL049452, X70685, AL117583, A03736, AF113019, AF090934, AR034830, I96214, AF215669, AL137478, AL110196, AL110280, A07647, AL137558, AL050138, AL133072, AL137480, U91329, A08911, AL049300, AL049466, AF183393, AL133081, Z37987, AF162270, U00763, AL137429, I09360, AL050024, AL080124, AL133098, AL117460, AL117585, AL096744, AF026816, U42766, AL080154, AJ242859, X52128, AL049465, AL080158, I00734, Y07905, E12747, X72889, AL133560, A58524, AL080074, A58523, AL122110, AF003737, AF100781, AL137526, AL137523, AF097996, AF051325, E06743, AF132676, AF061836, AL110225, M86826, AL133665, Y09972, AL050108, AL137488, AF106657, AL133113, AF113013, AL080234, AL133565, AF061573, AL137463, I89934, I89944, AL080086, AF078844, Y10655, AR020905, AL122093, Y11254, AL133080, A77033, A77035, AF087943, AL133640, AL137271, Z72491, AF111851, AL110221, AF090903, AF125948, AF113676, I66342, AL137533, A08915, E15569, AF185576, U80742, AL117394, AL050155, S79832, AF022363, AL122121, AF032666, D83032, AF119337, AR013797, I80064, AL122049, Y16645, AF067728, A65341, AL049283, AJ000937, AL049430, I33392, AL137560, Z82022, AF153205, A93350, I09499, L31396, U68387, AL133077, AF177401, S68736, AL137705, AF090901, AF139986, X65873, AF079765, L31397, AF081195, AL137476, AL122123, E08263, E08264, E07361, A93016, S61953, A21103, AL137459, X00861, AF126247, AF118064, AL133558, X87582, AL122050, AL137529, AF061795, AF151685, A12297, AF057300, AF057299, AL110171, AL080060, A08907, AF113689, AF017152, AL133075, AR068751</p>
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1492	HFIUG54	876475	<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 515 of SEQ ID NO:1491, b is an integer of 15 to 529, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1491, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1211 of SEQ ID NO:1492, b is an integer of 15 to 1225, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1492, and where b is greater than or equal to a + 14.</p>	<p>AA604375, AI096476, AI627324, AI623783, AW270881, AW176260, AA420479, AW263721, AI433858, AI888162, AW001768, AW190261, AW300137, AW166776, AI017162, AI034411, AW169112, AI493585, AA035308, AI400980, AI269743, AI086151, N20484, AA905363, AI244728, AW148617, AA126992, AW370989, AA490959, AW339199, N34406, AW391594, AA480346, AA970535, AA548169, N24599, C02570, AW380443, AA582926, H42703, AW105105, AA570014, AW026638, AA256814, AA364778, AW020880, Z41211, AI536061, AA035307, AA420478, H24299, AA678544, AW391563, AW339527, AA065097, AA613111, AI925770, AW391562, AA191512, D51223, D62210, AA847993, AA652779, AI750126, N75648, AI436629, N51447, AA743305, AL117597</p>
1493	HE8CX56	876476	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2284 of SEQ ID NO:1493, b is an integer of 15 to 2298, where both a and b correspond to the positions of</p>	<p>AI693062, AI936680, AI638780, AW130947, AI203659, AA969048, AA730307, D61225, AL041011, R49279, H64578, AA249856, AA120957, H64682, D81623, AL040722, N56191, AW265781, AA082593, AF029343</p>

1494	H2LAQ54	876480	<p>nucleotide residues shown in SEQ ID NO:1493, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 375 of SEQ ID NO:1494, b is an integer of 15 to 389, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1494, and where b is greater than or equal to a + 14.</p>	<p>AW068683, AA314376, D80193, D80227, D59619, D80210, D80240, D59467, D80195, C14389, D59502, D80164, D59275, D80038, D80219, D80269, D58283, D51423, C14331, D59859, D80022, D80166, D51799, D80391, D80253, D81030, D50979, D80043, D59787, C15076, D80378, D80212, D80196, D80188, D59927, D59610, D57483, D80366, D50995, D59889, D80024, AA305409, T03269, D80241, D80045, AW178893, C75259, AW178775, C14014, AA305578, AW179328, AW177440, D51022, AW352158, AW378532, D80522, D80134, D51250, D52291, AA514188, D81026, AW178762, AW177501, F13647, AW177511, AW352117, D80251, D80168, D80248, D58253, C14298, Z21582, C14227, AW360811, D81111, AW377671, AA514186, D80133, AW378540, D80064, AW375405, C14407, AW366296, D80132, AW360817, AW375406, D80268, AW378534, AW352171, AW179332, AW377672, AW179023, AW377676, AW178905, D51097, AW178754, AW179024, AW179020, AA285331, AW177456, D80302, AW178906, AW352170, AW177731, AW360834, AW178907, AW179019, AW179018, AW352174, D80439, D80247, AW378528, AW178908, AA102166, C14077, T11417, AI557751, AW178914, AW178781, AW378543, AW378525, D51103, AW178774, AW352163, T03116, D80157, AW378539, D80258, D59503, D58246, D80014, T48593, D59627, C06015, D58101, AW378533, AI557774, D45260, AW367950, AW178986, AI525923, H67866, D51213, D45273, T02974, AA809122, C03092, H67854, D80228, T03048, AW179013, D59317, AI525917, AI535686, C14344, C14973, D51221, AI525920, D59474, D59551, AA514184, AI525227, H67858, Z30160, AI535961, AW378542, U70370, AF009649, U54499, U71206,</p>
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1495	HWABG32	876481	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1386 of SEQ ID NO:1495, b is an integer of 15 to 1400, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1495, and where b is greater than or equal to a + 14.</p>	<p>A84916, AJ132110, A62300, A62298, AR018138, Y17188, X67155, D26022, A25909, A67220, D89785, A78862, D34614, D88547, AF058696, AR008278, X82626, AB028859, AR025207, Y12724, AB012117, A82595, AR066482, A94995, X68127, AR060385, AB002449, AR008443, A85396, A44171, U87250, A85477, I19525, A86792, I50126, I50132, I50128, I50133, X93549, AR066488, AR016514, AR060138, A45456, A26615, AR052274, Y09669, AF009648, A43192, A43190, AR038669, I18367, AR066487, A30438, D88507, I14842, AR054175, D50010, Y17187, A63261, AF135125, AR008408, I79511, AR062872, A70867, AR008277, AR008281, AR016691, AR016690, U46128, D13509, A64136, A68321, AR060133, AB033111, AR064240</p>
1496	HMTBE05	876483	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by</p>	<p>AA873178, AW340076, AA453258, AA453359, AI200335, AI189856, AI127354, T57079, AA031327, AI096450, AA948375, AA031328, AA977624, AA994405, AI148795, AI340956, AW014990, AI652909, AI160243, AW026239, AI093526, AA923811, AI091630, AI365268, AW380222, AI367151, N32402, AA583097, N56822, AA579988, AI343747, H12681, AI825678, AW197534, T29148, F08275, AI468467, T95661, T82166, T57151, AI880292, T81821, F04505, AA481266, R41605, AW372903, AA662708, AW130992, AI818777, AA764938, X14356, L03418, X14355, L03419, M91645, M91646, M91647, M82819, L03420, M63835, M91555, M91554, M63834, S45709, M91552, S45707, M63832, M63833, M91553, M91550, M63830, S45704, S79667, A37858, AL133558, AF070643, AJ001388, AL109725</p> <p>AI026945, AI808573, AI620239, AA948677, N53940, AW249558, AI096948, AA159915, AI095014, AI871045, AI950931, AA455901, AW009419, AI149374, AA024477, AI433743, AA428948,</p>

1497	HKABLO5	876484	<p>the general formula of a-b, where a is any integer between 1 to 1470 of SEQ ID NO:1496, b is an integer of 15 to 1484, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1496, and where b is greater than or equal to a + 14.</p>	AA039950, AA165025, AI884373, AI149074, AI184801, AI188603, AI937231, AA024476, AI469664, W26293, AA831823, AI766893, AA830218, AA476574, AA040001, AW404545, AA455902, AA027936, AI566799, AA582203, R15907, AA422121, AI879131, T34650, Z43817, AA738453, AI220916, N59030, AI419568, AI300117, AA738075, AI967928, Z39886, AW071642, AA863299, AA877869, AI382238, AI149361, AW169605, AA483840, AI436690, AA448896, AI800263, AI831898, AI262999, AI984945, AI915652, AI701265, AI344209, M79093, AI829004, AA028041, AW408623, AI982982, AI202924, AW246104, T66533
			<p>Preferably excluded from the present invention are one or more polynucleotides comprising a polynucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2178 of SEQ ID NO:1497, b is an integer of 15 to 2192, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1497, and where b is greater than or equal to a + 14.</p>	AI740522, AI309318, AI376662, AI741390, AI742840, AA679083, AI765150, AW002945, AW192895, AA001262, AI052703, AA648295, AI929375, AW157334, AI799150, AA577690, AA909347, AA608744, AI879998, AI421323, W55919, AW373539, W84527, AA947742, AA861283, AA065133, AW168112, AA460061, AI300565, AW204198, AA155821, AW104051, AI800773, AI193965, AA101195, AI582368, AW057835, AI348116, AA527861, AW009823, AW029295, AW022530, AA708118, AW238854, AI452699, AI016610, AA669337, AA480279, AA278360, AI749692, AI160871, AW130090, AA744919, AA760760, AW007135, AI275625, AI057288, AI494111, AA831711, AA687284, AI815697, AI374689, AA155925, AI862854, W55920, AI367891, W04222, AW272692, AA628638, AA707011, AI800064, AA043251, AA160009, N62094, AI671739, AA292750, AI052618, AW166814, AA152365, AI475145, N78325, AA001852, AI952464, AI953334, AI346774, AI243902, AI271553, AI637742, AA514862, AA025382, AA484277, AI288842, AI311020, N50975, AW027908, AA132226, AI436690, AI130684, N74257,

	AI198852, AI354226, AI969402, AI026752, AA453035, AA668696, AI090673, AA971631, AA984913, AW264660, AI798057, N93127, AL120009, AA628641, AA281226, AA922510, AW163390, AA161457, AA187227, AA764824, AI521457, AW439109, AA088421, AA722831, N23855, AA807549, AA043590, W67807, AA026016, AA494441, AA179097, AA565588, AA065202, AA928577, AA633795, W15314, AI886794, W84515, AI797422, AA120907, AA046354, AA788597, AA083453, AA765379, AA009957, AI190992, AA284411, AA857371, AA459969, AA741542, AA001988, AI206746, AA160010, AA586336, AW235920, AA010759, AW075660, AA131616, AA046070, AA247207, AA002267, AW020230, AI123351, AA281235, AA426610, AA780786, AI825394, AA083357, W73815, AI439077, AI434359, AI695507, AI344209, W69764, W60465, AI281441, AA568376, T63795, W38654, AA028052, AI826611, AI800263, AW270667, AI370333, AW117628, W52413, AA127865, AW439098, T64108, AA164988, AA211263, AA278324, AA327661, C15972, W78007, AA011120, T47065, T34888, AA204925, AI758966, N66464, AA491375, AA292539, AA127890, AA845300, AA092473, D54180, AA827429, AI984945, AI074775, AW341620, AW438482, N99121, AA054675, AA226936, T94385, AA126323, AA227046, AI559910, AA574112, AI290025, AA355027, AA460014, AW050391, AA926777, AA373413, AA356295, AA621388, AW009092, AA301008, AA482700, T64028, AA332547, T35591, AA205052, T63820, AA738461, AI000546, N33952, T57017, AI887555, AA365643, AA147057, AA428948, AA448896, AA211143, T51962, RI5907, AA131382, AA142894, T30133, AB030905, ACC05841, Z84488, U26312, U95740, AF063304, AB005618, X56683, A75245, AL023775, D28877, U09120, AF086270, T47064, T52042, R36239,

1498	HOCTA74	876487	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 671 of SEQ ID NO:1498, b is an integer of 15 to 685, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1498, and where b is greater than or equal to a + 14.</p>	<p>N38911, N46485, N58965, W39742, AA028051, AA128181, AA132330, AA147058, AA152387, AA186506, AA278995, AA278348, AA525751, AA525773, AA525871, AA661828, N56031, C00146, AA091857, AA095676, AA170857, AA398724, AA665715, Z19940, AA732979, Z18797, AA991829, AI001836, Z39146, AI341188, AI566368, AI652212</p> <p>AI302800, AW118693, AI808667, AI065036, AW080952, AA862461, AI201847, AI138543, AI015998, AA865819, AA470462, AA454546, AI221895, AA481881, AI039771, AA535254, AA482063, AI301489, AA551867, AI018725, AL121442, AI244932, T88913, AI914566, AI017732, AI016693, AI833052, AA608575, AA120921, AA120922, N57711, AW151576, AI572464, AW303732, AI471156, R85699, H60433, AA890675, AI262997, AA620388, T47276, AA534566, AI625454, AA852619, AA889211, AA707578, AI718799, T47275, AI124998, AA477467, H88225, AA680222, H66348, N63309, AA131070, AA131015, AI474581, AI561334, AW392670, Z99396, AW372827, AW384394, AW363220, AL119497, AL134528, AL119443, U46341, AL119457, AL119319, AL119363, AL119341, AL119496, AL119324, AL119355, AL119483, AL119484, AL119391, AL042965, AL119335, U46350, AL134920, AL119522, AL119396, U46351, U46349, AL119418, U46347, AL119444, U46346, AL037205, AL134902, AL042614, AL119439, AL042975, AL119399, AL042551, AL119401, AL134518, AL134524, AL043029, AI142132, U46345, AL042984, AL134531, AL134538, AL134525, AL042450, AL043019, AL134536, AL037051, AL036725, AL042970, AL119488, AL042544, AL042542, AL043003, AL119464, S79219, X14608, M22631, M26121, AL122056, A81671, AR066494, AR060234, AR054110, AB026436, AR069079</p>
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1499	HWLUU48	876490	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1035 of SEQ ID NO:1499, b is an integer of 15 to 1049, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1499, and where b is greater than or equal to a + 14.</p>	AA099027, AI887335, AI887905, AI694672, AI566740, AW086500, AI222690, AI686357, AW085264, AI590636, AA411391, AI431702, AI383310, AA436251, AI913708, AI015064, AA453266, AC004190, AP000516, AB014087, AL020989, AC007100
1500	HULAJ15	876491	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1004 of SEQ ID NO:1500, b is an integer of 15 to 1018, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1500, and where b is greater than or equal to a + 14.</p>	AI991884, AI872008, AI660228, AW167205, AW084525, AA601542, AI859727, AI818462, AW080935, AI687318, AA552217, AA621566, AA886903, AA706568, AI379184, AW000876, AI569542, AI860861, AI887280, AI653757, AA461121, AI554798, AI016349, AA622753, AI332503, AI246460, AI332793, AI144192, AA460819, AA563883, AA455216, AA621675, AA862530, AA858222, AA581826, AI806046, N35715, AW328329, AI262551, AI204029, AI149450, AW071084, AI289219, AA609900, AA927266, AI707484, AI095745, AA618130, AI721109, AA931503, AI440027, AI275080, AI299248, AI276688, AI750085, AA088417, AA304654, AI262552, AI688181, AI282807, AW294666, AI335810, AI748980, AI335786, AA088540, AA420995, AI355863, AA102237, AA070673, AA595597, AI750051, AI749025, AI811127, AI086655, AI278320, AA443973, AI080248, AI367574, AA421075, AA052939, AI418137, AA902863, AI265947, AA931116, AA430411, AA251968, AI355088, AI290353, AW305028, AI005354, AI367787, AA913300, AA053492, AW008828, AI355089, AI890124, AA564009,

			AI359453, AI282383, W45582, W52209, AA102236, T67787, AI368584, AI382940, AA846519, AI095153, AA578680, AA838282, AA879315, AA305607, AA430359, AI095598, AI708067, AI383117, T67711, AI720469, AA879062, AA186928, AA494466, AI832504, H79930, AA417983, W45545, AA469124, AA526593, AI719480, AI832612, AA420865, AI041840, AA305069, AI244411, AW088865, AI264706, AA242885, N35628, AA858264, H62987, AI460162, AA865264, AA418153, AI435908, AA353482, AA740793, AI310701, AI143647, AA320588, AI541426, AI581554, AA420466, AI472533, AA188357, AI888688, AA373467, AA630328, T61575, AA330716, AI460166, AI381692, R44192, AA444156, H62866, H96297, AI131189, T29504, AA193634, AI217206, AA102029, AA136055, AW028629, AA853950, AA294960, AA330845, AI582088, W79666, AA377021, W74128, AA370626, AA876408, AI000545, AI749041, R02407, AA102028, AA126713, R23407, U46351, AA193598, AI581181, AW082579, T61023, H96296, W24691, AI431603, T82007, AI123178, R02308, AA216169, AA469193, N26519, AA576977, AI858582, N93058, AI361535, H79833, R63786, H57907, AB006780, M36682, M35368, M57710, AR036975, S59012, L23429, X78879, U06470, X16834, J02962, J03723, X16074, AR036976, L08649, AF031422, AF031425, M33215, AF031424, AF031423, ALI33655, AL121593, U89295, A59344, M27260, AL122093, AL117599, AL133015 AA773574, AI870173, AI090858, AA599163, AA205487, AL134981, AA308686, AW247784, AW377280, AA581816, AI435156, AA599212, AA164748, AI499069, AW148604, AA181056, AI828823, AA160573, AA894927, AA446427, AA308175, AA314621, AA812415, AW377338, AA307680, AW377313, AA315193, AA514946,
1501	HSYAJ64	876494	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2017 of SEQ ID NO:1501, b is an integer of

			15 to 2031, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1501, and where b is greater than or equal to a + 14.	AA948141, AA652118, AI090292, AA435521, AI342258, AI240388, AA205318, AA243054, AA768432, AI082283, AA024693, AA456625, AI911813, AI363735, AA446119, AA652124, AA424926, AI263712, AA024647, AA205575, AI004571, AA630601, AA307175, AA164747, AI042562, AI934643, AI341665, AA313490, N75485, AA207213, W91894, AA426166, AA307366, AI433060, AA307046, AA195483, AA252561, AA527990, AA989506, AA223574, AI270387, AA243053, AA455806, AA307677, AA403863, AA315014, AA159366, AA157555, AA158206, AI568188, AI028221, AI445024, AA927196, AA307925, AA649534, T28878, AI085919, AW392054, AA776680, AI672839, AA312108, AA376260, AW392206, AA654257, AI865398, AA347324, AA626750, AA219493, AI630717, AA307419, AA662020, AI510831, AA442877, AA350306, AA362375, AI935046, AA152328, AI305172, W05296, AI278536, AI308922, AA053461, AA053213, AA135056, AA186979, AW173202, AW377352, AA206750, AA608732, AI025236, AI719108, AA325720, AI922470, AA223615, AA152329, AA626448, AA649822, AA300684, AA362586, AA626522, AW377293, AA315660, RI4052, AA333552, R37150, R15974, AI569355, AA190772, AA362376, AA593069, AA921347, AA316929, AA180011, AA134971, W95113, AA978212, AI932667, AA040890, AA830424, AW383641, AI632334, AA947203, AA326527, AA629781, AW383640, AA954366, R05778, C21408, R05864, AW392327, AA191382, AA322735, H55311, AW383658, R15975, AW410508, AA995270, AA160528, AA219455, AI703040, AW104153, M27396, M15798, M27838, X52130, U07201, U07202, U38940, AC005326, L35946, M27054, L35936, L35937, L35938, L35945, L35940, L35941, L35942, L35939,
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1502	HETIF19	876495	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1449 of SEQ ID NO:1502, b is an integer of 15 to 1463, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1502, and where b is greater than or equal to a + 14.</p>	<p>L35943, L35944, L35935, T66600, T66601 AA926696, H16874, AW376009, AA313468, R23401, N35321, R13283, AW152493, AI027550, T11328, AR036119, X92689, U70538</p>
1503	HLVEA23	876496	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 556 of SEQ ID NO:1503, b is an integer of 15 to 570, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1503, and where b is greater than or equal to a + 14.</p>	<p>AW161801, N56973, N73756, AA479038, D44982, N81193, W65438, H25021, N22293, N47355, AA973373, AA477521, AA595499, AA838190, AW172858, AI887235, AL134275, T59612, AW169038, AA847980, AI002744, H02058, AI590442, AB014528, AC005062, AL135783, AL117258, AL133163, AL137100, AC004859, AL035410, AC004067, AC002349, AC005725, AF205588, AC008033, AC004887, AL049589, AC002412, AF130249, AC005261, AC007488, AL033533, AC005722, AC007011, AC006547, AC006080, Z98304, Z84469, AC005664, AF031078, AF030876, AF031076, Z95152, AC004019, AC005280, Z69907, AC006213, AC007238, AL049569, Z93016, AP000344, AL031597, AC004605, Z82203</p>
1504	HAPQU61	876498	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 484 of SEQ ID NO:1504, b is an integer of 15 to 498, where both a and b</p>	<p>AI949815, AI813450, AI819294, AI269353, AA421819, AI089074, AA834705, AA847960, AI559836, D31784</p>



1505	HE80T93	876499	<p>correspond to the positions of nucleotide residues shown in SEQ ID NO:1504, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2047 of SEQ ID NO:1505, b is an integer of 15 to 2061, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1505, and where b is greater than or equal to a + 14.</p>	AA485504, AA133234, AI339710, AA743093, AI688621, AI096844, AA129712, AI860744, AI420708, AI278953, AI278568, AW006666, AI571986, N68247, AI358873, AA314945, AA341071, AI346152, AI219397, AA488692, AA148150, AI362046, AW050985, AI090396, R60368, AA626449, AW272569, AA308535, AI471517, AW135592, AW205875, R60312, AI590397, AI078709, N39886, AA557504, AA970783, AI419556, AA338145, AA534362, AA351801, N26928, AA143763, AA557513, H87951, N57132, AW051845, AW394065, H95626, AA309736, AW204673, AI457186, AA376417, AA570135, AI805191, AA376416, AA310109, N68052, H95981, AI049818, Z21567, AA079141, AW389275, AL049742, D86997, D88269.
1506	H2LAB08	876503	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2382 of SEQ ID NO:1506, b is an integer of 15 to 2396, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1506, and where b is greater than or equal to a + 14.</p>	AI911983, AI927427, AI889004, AI693602, AL045565, AI767631, AI150323, AA576743, AI201732, AA811424, AA436321, AI890062, AA812674, AI348111, AA776471, AA904047, AI909133, AA262396, AI909125, AA827237, AW084600, AI890814, AA778086, AI708713, AA436197, AI580236, AA313219, AI926738, AA550977, AI819536, AA688044, AA252436, AA307642, AI569986, AI174417, AA251902, D19596, AI687789, AW029076, AA305817, H93729, AI000199, AA232315, AI346715, AW275185, AI273086, AA689252, H02731, H04075, H88463, AI678322, AA541528, AI474632, AA651878, AA307939, AA378903, AI934157, AA243609, AI267661, AA525290, AI824311, R37260, R59445, AA378902, D61809, AA361618, R12332, AI341322, R23315, R70591, R59386, AA336382, AA831575, R75944,

				<p>H00410, AA354320, AA602417, AI567956, D79295, N87729, H03382, H01205, R31246, H00817, R39541, R92975, AL045564, D58065, AA730991, C16596, C16509, AA580841, AA383636, AA296630, D62972, D82320, AW073685, AI364834, AA598715, AI355779, AI289791, AI539800, AI500714, AI355008, AI866469, AI434242, AI539771, AI889189, AI815232, AI537677, AI371243, AI582932, AI582912, AI927233, AI433157, AI612913, AI491710, AI366900, AI804505, AI610362, AI434223, AL039390, AI440239, AI863197, AI924051, AI366910, AI539847, AI521596, AW074057, AI932620, AL040207, AI590043, AL042944, AI567935, AI539260, AI866465, AI801325, AI500523, AI538850, AI887775, AI537187, AI923989, AI284517, AI872423, AI500706, AI445237, AI491776, AW151138, AI521560, AI500662, AI284509, AW172723, AI440263, AI538885, AI889168, AI866573, AI633493, AI434256, AI805769, AI888661, AI284513, AI888118, AI285439, AI859991, AI436429, AI889147, AI623736, AI581033, AI371228, AI440252, AI431307, AI440238, AI567971, AI866786, AI860003, AI610557, AI431316, AI242736, AI828574, AI887499, AI537273, AI539781, AI539707, AI702065, AI885949, AI285419, AW089557, AI559957, AI521571, AI469775, AI866581, AI567953, AI815150, AI446495, AI867068, AI225248, AI610426, AI567940, AI282264, AI926593, AF035293, AF081281, AF052112, AF077198, AF077199, D63885, AC004062, U97146, AR028701, U97147, U97148, U89352, AC004548, AL133074, Y17793, AL133076</p>
1507	HISBB72	876504	Preferably excluded from the present invention are one or more	<p>AI589824, AW149545, AA826266, AI285235, AA548396, AI580850, AI934791, AI262821,</p>

1508	HCHBN47	876507	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1139 of SEQ ID NO:1507, b is an integer of 15 to 1153, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1507, and where b is greater than or equal to a + 14.</p>	<p>AI288864, AA933871, AW379374, R55964, AA741334, AI422503, AI884993, AI422504, R55965, AA515979, U41901, AR030574, AR030579, AR030578, AR030581, AR030575, AR030577, AR030580, AR030582, AR030589, Z94719, Z94720, Y08171, Z94718, AR030590, AR030583, AR030587, AR030584, AR030585, AR030588, AR030586, AR030591, AR030592</p>
				AP000066
1509	HFADJ29	876511	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 638 of SEQ ID NO:1508, b is an integer of 15 to 652, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1508, and where b is greater than or equal to a + 14.</p>	<p>AI114564, AI064937, AI207577, AW024388, AA167328, AI357366, AI826158, AI656065, AA890501, AA314294, N72119, AI368841, N25212, AI796295, AI215697, N48787, AI066435, AA171687, AA043292, AI270341, AI191607, AI632032, AI873864, AA508855, AI828826, AA996333, AW192143, AI298715, AI872218, AI687959, AI753230, AI926791, AI436234, R74567, AA828059, AA640994, AI801845, AA644673, AA492531, AI219265, AA043291, R76364, AI695300, H03697, AI628314, AI302487, AA147569, R62982, AA312605, H00964, AA305334, AA156441, AA370497, AA333089, R97205, AA657712, R63037, R76689, AA769559, AA761876, AA167149, H64689, H65183, H00965,</p>

1510	HWLQP42	876513	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 999 of SEQ ID NO:1510, b is an integer of 15 to 1013, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1510, and where b is greater than or equal to a + 14.</p>	<p>C03639, AA361522, AA370109, AW131681, T48460, AA807111, W38740, AA548193, AA350472, AA350471, T39360, AA171802, N45578, AA330808, AW379530</p> <p>AA196276, AA524473, AL040260, AA533568, AA600703, AA773551, AA292150, AA004500, AI928071, AI612760, AA411191, AW264086, AW206769, AA496356, AA434061, W42808, AA232555, AA292045, AI085934, AA182481, AA292071, AI087140, AA004501, AA496406, AA434125, AW317087, AI752948, AA443125, AA456190, AA400594, AA292028, AI682335, R73572, AA766115, AA292042, H61296, H61291, AL043495, AA044201, R11520, AA705241, AA652065, AA043939, AI536587, R97731, AI352191, AI630315, AA350112, D31167, AA031359, T85323, AA429498, H15771, R44134, AI351143, AW138388, AA661960, AI215409, AA411071, AW243696, R72952, AW068860, AI567210, AI393957, AI970891, AI273925, AA321611, AA401967, AI224608, AI084609, AI279699, AA031603, AI915877, AA400679, AI092030, AA031637, AI630462, AA429499, AA031476, AA301177, H15770, AW381505, AA182758, AW381475, R10445, AW381498, AI992085, AA312507</p> <p>AA305114, AL022398</p>
1511	HDPAG07	876518	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 442 of SEQ ID NO:1511, b is an integer of 15 to 456, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1511, and where b is greater than or equal to a + 14.</p>	
1512	HLTAR39	876524	<p>Preferably excluded from the</p>	<p>AI133655, T96748, AW369762, AA350015, AA360756,</p>

1513	HWLRF38	876526	<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2153 of SEQ ID NO:1512, b is an integer of 15 to 2167, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1512, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 818 of SEQ ID NO:1513, b is an integer of 15 to 832, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1513, and where b is greater than or equal to a + 14.</p>	<p>AW386072, AI625829, AA534216, AW243183, AW367779, AI697340, AI754731, AW367807, AC004707, AC004675, AF088219, AC006026</p> <p>AW183028, N28485, AI306451, AI536589, AW072566, N24976, H82376, AI814709, AI376566, AI352453, AI590303, AI280262, AI761747, AA554283, AI222290, AA644328, AA661978, AA587549, AA045302, AW274520, AW043629, AA630727, AW273650, AI368900, AI381943, AI290422, AI167243, AA993296, AA977315, AW337456, AA029935, AA779545, Z17865, AI493253, AI624318, AA908755, AI168437, AA757538, AA977243, AI740891, AA524068, AA628420, AI123070, AI692442, AI868044, AA687907, AI370323, T31450, AI867272, N46853, N67292, AW276010, N69329, AI768256, AI022628, R83171, AW073539, AA180796, AI761569, AA045408, AW134931, AW085513, AW059629, D11973, AL133563, AJ006412, AB018284, AJ006776</p>
1514	HCRNM09	876530	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1350 of SEQ ID NO:1514, b is an integer of 15 to 1364, where both a and b correspond to the positions of</p>	<p>AW362945, AI916280, AA632418, AW451840, AA579245, R85405, AW366782</p>

1515	HOB AE30	876533	<p>nucleotide residues shown in SEQ ID NO:1514, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1479 of SEQ ID NO:1515, b is an integer of 15 to 1493, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1515, and where b is greater than or equal to a + 14.</p>	AA947739, AI400455, AI079804, AW270919, AI435830, AI452944, AA747433, AI570117, AW207124, AI580309, N95645, AI309204, AI338445, AI272895, AI499408, AW079078, AI797006, AI917984, N98806, AA282725, H01411, H00875, AI565322, AI240334, H01410, R74104, AA831514, R61345, AW150637, AA301342, N69359, R74103, AI672118, H00874, H78279, AA514041, T49557, H79404, AI739220, R31153, AI864092, AA344229, AA693339, T49556, R31104, AA085178, N83511, AI373773, AI349772, AW104724, AL119748, AW071349, AL121365, AI633419, AI537677, AI475371, AL119049, AI536638, AL040243, AW198090, AW087445, AL121270, AL045500, AI433976, AI871697, AI433157, AI536685, AI609331, AI612913, AI568855, AI269205, AI682743, AI682106, AI866457, AL121328, AI815855, AI538716, AL036802, AI580927, AI440239, AI436456, AI590415, AL047763, AI499463, AI207510, AI275175, AI064830, AL045903, AI687728, AI802542, AI500523, AI815383, AI621209, AL119791, AI539771, AI500659, AI524671, AI863014, AW117882, AI684265, AI620284, AI469532, AI906328, AL036146, AI580190, AW071417, AI818683, AI284484, AW274192, AL036396, AI521012, AI702406, AA470491, AW301409, AL036361, AW080838, AW169671, AI920968, AI637584, AI439717, AI349256, AI499393, AI491852, AI934035, AI907070, AL043981, AI648684, AW074993, AL036274, AI149592, AI539153, AI564719, AI439745, AI872711, AI568870, AI613017, AI135661, AL047042, AI690835,
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AF090943, AL137459, AF113013, AL110196, AF118064, AF113676, AJ242859, AL050277, X84990, AF125949, AF090896, A93016, AL110221, AL080060, E03348, A08913, AF017152, AL050108, A08916, AF113689, Y16645, AL049452, AR059958, AL096744, AL022147, AL133557, AL137557, AL050116, AL137527, AL133565, AL049314, AL122123, AL133080, AL049466, AB019565, AL080137, E07361, AF158248, AL133093, AF111851, I48978, AL122121, AC007390, AF177401, AJ000937, AF125948, AF113699, AF091512, Y11254, AL117435, AF091084, AL137283, AC002464, AC004883, U62317, X63574, AL035587, AC004686, U91329, AF146568, AR011880, AL137550, X82434, AF097996, AF079765, AC007298, AL133560, AL110280, AL117394, AL049430, AL110225, AJ012755, AC004383, A65341, AL078602, Z98036, I49625, AC005291, AC006115, AL133113, I66342, AF042090, AC006501, U95739, AL049382, AJ238278, E07108, AC007458, AC002538, AC004200, AL137294, E02349, AL117585, A77033, A77035, AL049300, AC006371, AC005829, Z82206, AL137271, AL117583, U00763, A58524, A58523, AL133014, AC004987, A08910, I33392, AL122098, AL049464, A08912, AC002467, AF183393, A12297, X70685, AL031732, AC010077, AL122110				
AI650305, AI949332, AI206515, AI188549, AW169558, AA857218, AI433853, AW204540, R68303, R42247, AA994295, AI580329, AI624558, AA602338, R44174, Z40075, AI015727, N34408, R74002, R68268, R53421, R54010, Z38312, R44219, R49558, AA090402, F01959, AA090979, U72788, AI304833	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2095 of SEQ ID NO:1516, b is an integer of 15 to 2109, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1516, and where b is greater	876534	HATCV09	1516



1517	HCRNE16	876535	than or equal to $a + 14$ . Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 576 of SEQ ID NO:1517, b is an integer of 15 to 590, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1517, and where b is greater than or equal to $a + 14$ .	AI274758, C06072, AI589250, AI470584, AA227219, AW021868, AA747122, T27280, AC007501, U80736
1518	HCRPV63	876536	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 411 of SEQ ID NO:1518, b is an integer of 15 to 425, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1518, and where b is greater than or equal to $a + 14$ .	AI143683, AI924826, AA086365, AI792153, Z79581, Z79582, S81107
1519	HSKKP02	876538	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1172 of SEQ ID NO:1519, b is an integer of 15 to 1186, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1519, and where b is greater	AA916748, R83779, AA331626, AA400220

1520	HOVAN13	876540	<p>than or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 446 of SEQ ID NO:1520, <math>b</math> is an integer of 15 to 460, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:1520, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	
1521	HWBEX78	876543	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 1658 of SEQ ID NO:1521, <math>b</math> is an integer of 15 to 1672, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:1521, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p> <p>W20138, AA229752, AI380196, N44538, AA026809, R41836, N71112, N33777, W05473, AA026870, W15415, AA888089, W39614, R68936, AI143439, H05574, AA229960, H00351, R63287, T54159, C05110, AI867490, H00306, W91983, T53767, R63233, AA768472, T54164, R71658, R71163, N91009, T53773, R68825, AL137657, AL109669</p>	
1522	HRODG74	876544	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 574 of SEQ ID NO:1522, <math>b</math> is an integer of 15 to 588, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:1522, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p> <p>AI797095, AA902901, N47240, AI252632, AI718169, AW079806, H09548, AI203811, AA459245, D25745, C21350, R63205, AC006065, AC002368, AF025422</p>	

1523	HCROK30	876545	<p>than or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 506 of SEQ ID NO:1523, b is an integer of 15 to 520, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1523, and where b is greater than or equal to <math>a + 14</math>.</p>	AA278251, AA682308, AI540716, AI184153
1524	HDABK73	876546	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2777 of SEQ ID NO:1524, b is an integer of 15 to 2791, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1524, and where b is greater than or equal to <math>a + 14</math>.</p>	AI744148, AI744113, AI860811, AI889014, AI765413, AW237314, AI765401, AL042645, AI867571, AW293518, AA534578, AI432178, AW169762, AA506984, AA420605, AI142237, AA406169, AW188054, AI147954, AA430324, AL040186, AI197943, AI589634, AA569041, AI015938, AA433904, AA070872, AI188829, AI124780, AA421239, AI149224, AA420647, AI916160, W73655, AI076564, AI768356, R51293, AI638215, AI125307, W51790, AA172002, AA425349, AA565222, AA313542, AA825728, R35270, AW204507, AA100809, W28763, AI222042, AI479185, W26572, W45413, W73608, R52192, AI160529, AW440819, AI422286, AI298011, AA171761, AA421279, R51403, H62930, R52097, R59309, AA581790, W81419, AI768849, W40121, AI708313, AA373236, AW368276, AA434583, Z42217, W81420, AI962360, AA325784, R59310, AI271621, T25845, T06069, F05246, AA806028, Z38264, AA071023, AA815452, N54389, AA810542, AA383377, AI370602, R50941, T87272, T87186, F01748, AA947741, AA773493, AA890049, AI985779, AA984284, AW272799, AL043147, AB007891, AI471995, AW393929, AA044743, AI741975,
1525	HOGC078	876548	Preferably excluded from the	

<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 673 of SEQ ID NO:1525, b is an integer of 15 to 687, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1525, and where b is greater than or equal to a + 14.</p>	AA044797, AI720824, AI992258, AI480029, AI803250, AI095557, AI245572, AA662934, AA876346, AW327457, AW393932, AW157188, AI669783, AI286104, AA025525, AI090194, AI128230, AI095934, AI189306, AI950299, AI467898, AA028934, AI742307, AA194396, AI809949, AI160162, AI122798, AI034059, AI244940, T55337, H22613, AI431317, AA746600, AI150927, R19215, AI431319, R96173, AW043889, AA876265, AA844331, AW129224, AA860575, AA487470, AI432084, U56654, AW157607, AA669015, AI825990, AA335548, AA731264, AA932576, AA768549, AI270663, AI497894, AI221399, R13183, T39355, AA564849, AI866853, AW272239, AW150208, AI572774, AA668506, AI872423, AI866127, AI568138, AA641818, AI923370, AW118518, AL038665, AW264727, AI582932, AW078818, AI866469, AI687168, AL037582, AL037602, AI241923, AI613038, AI473536, AI866465, AI559872, AI955117, AW020095, AW078606, AI288285, AW090451, AL046942, AW079409, AI635016, AL079963, AI827058, AI590043, AI866780, AI687166, AI620302, AI611738, AI446721, AI961589, AL041772, AI500061, AI457589, AI559752, AW166870, AI125884, AI687127, AI802542, AI452707, AI932503, AL039132, AI581362, AI624293, AI434656, AI587279, AI561228, AW051226, AI348870, AA983883, AL135024, AI289542, AI554821, AI453339, AL138420, AW149925, AW150557, AI915291, AL039086, AW163834, AI654276, AW026882, AI433157, AW083572, AI702073, AA225339, AI860897, AI418681, AL036638, AI923989, AI800341, AW131294, AI539800, AI621341, AI633125, AI698391, AI538564, AL040827, AL046466, AW152182, AI270429,
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AI355779, AI695726, AI638644, AI628325,  
AI819014, AI818980, AW079075, AI357644,  
AW262552, AI927256, AW128834, AL046595,  
AI636588, AI651840, AW054964, AL119399,  
AW264895, AI884318, AI889189, AL120995,  
AL048323, AI912434, AI474146, AL048340,  
AI612913, AI469270, AW024793, AI818353,  
AW105459, AI866770, AI445303, AI309306,  
AI475806, AI267185, AI583558, AI932794,  
AW410259, AI686576, AI335214, AW148294,  
AW198090, AI270706, AA502794, AL039716,  
AI891084, AI520702, AI691088, AI569975,  
AI434731, AI538817, AI571439, AI279925,  
AI281757, AI270295, AI819545, AI701975,  
AL036673, AI670002, AI335426, AI348777,  
AW051088, AI819976, AI927233, AI912438,  
AI491842, T69241, AI963846, AI873638, AI565172,  
AW148544, AI270183, AI699823, AW263355,  
AI612750, AI540674, AI817523, AW087915,  
AL041573, AL043152, AI433611, AL080011,  
AL119457, AI670009, AI285735, AI824576,  
AI921254, AI538885, W74529, AW020397, AL046618,  
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AI500714, AW196078, AI673363, I33392, AL137480,  
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I48978, AL133640, AF008439, AF111849, AF047716,  
AF090900, X63162, AF106657, AR013797, AF102578,  
AL137530, AL096744, A08910, A08909, AL096751,  
AJ005690, A08908, AF090903, AR038854, X82434,  
S36676, AL137557, AL137476, AF183393, AL080154,  
AL117457, A08913, Z97214, A65340, AF107847,  
I17544, A08912, E06743, AF111112, I48979,  
I33391, AL117416, AL117460, A08916, S76508,  
AF131773, AF026816, AF215669, AL133075, U78525,  
AL122093, AL133113, AL050092, AR034821,  
AF061573, U58996, A58524, A58523, AF090934,

AF113677, Y14314, AL050155, AL117435, S78214,  
A86558, AL049938, AL049466, AL137550, AL133014,  
AF090896, D83032, E05822, X84990, AF017437,  
Y16645, A18777, AL050172, AL137711, AL137292,  
Y11587, AF113019, X79812, A08907, I89931,  
AF141289, U68233, I92592, AJ003118, AF185576,  
AL110280, U77594, I49625, A65341, AL050024,  
AJ000937, AF087943, A76335, Z82022, AL080234,  
AL122100, AL137558, I32738, AF030513, E01614,  
EI3364, A03736, L04504, U88966, AL049464,  
U42766, AF028823, AF113699, Y09972, AF124728,  
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AR011880, AF118094, AF090943, AR068753,  
AL110296, AL137459, AL049452, AL137529,  
AL133016, A23630, AF081197, AF081195, AL117648,  
X06146, X56039, X62580, AL137560, AL137271,  
AL133081, L31396, S7771, AL137537, L19437,  
AL049314, A49139, AF061795, AF151685, S83440,  
AF044323, AL050393, AF106862, AF169154, A08911,  
U67958, Y10936, AL049430, X80340, AF118092,  
AF192557, AF176651, AF106697, AF017152, I09499,  
I80064, AL137488, AL133619, AL133072, U35846,  
AF032666, AJ012755, Y10080, X63410, I89944,  
Y10655, AL050277, AL133637, AL117587, AF153205,  
AF158248, U80742, AF139986, U75932, A21103,  
L04849, AF113694, AF091084, AF113690, AF145233,  
AF118070, E04233, AL080110, U49434, AF026124,  
U96683, AL110221, AL117578, U87620, A58545,

1526	HCRNG10	876549	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 694 of SEQ ID NO:1526, b is an integer of 15 to 708, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1526, and where b is greater than or equal to a + 14.</p>	<p>D16301, AL137658, U72621, AL080126, AF104032, AL110218, I68732, E12747, AL133560, X81464, AF013214, AF078844, AL080060 AA737831, AA651628, AI239587, AA912347</p>
1527	HWLRR08	876551	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 604 of SEQ ID NO:1527, b is an integer of 15 to 618, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1527, and where b is greater than or equal to a + 14.</p>	<p>AI040700</p>
1528	HTEPP55	876553	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1089 of SEQ ID NO:1528, b is an integer of 15 to 1103, where both a and b correspond to the positions of</p>	<p>AI950957, AA454500, AW301277, AW409745, W19086, AW388466, AW388282, AA129369, AA159858, AW450017, AW418819, H56484, AA437031, AW082355, AW204742, U28413</p>

1529	HDLAR46	876557	nucleotide residues shown in SEQ ID NO:1528, and where b is greater than or equal to a + 14.  Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 206 of SEQ ID NO:1529, b is an integer of 15 to 220, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1529, and where b is greater than or equal to a + 14.	AL110374	
1530	H2CBW66	876558	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 424 of SEQ ID NO:1530, b is an integer of 15 to 438, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1530, and where b is greater than or equal to a + 14.	AI207993, AI797860, AW137483, AA934986, AA621885, AA569967, AA315265, AA782950	
1531	HOGDS65	876559	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2048 of SEQ ID NO:1531, b is an integer of 15 to 2062, where both a and b correspond to the positions of	AW276060, AW117930, AW271245, AA490688, AI598114, AA315280, AI018136, AW264544, AW378323, AW384544, AW384563, AW378307, AW383155, AW384497, AW086214, AA961504, AA257102, AW192483, AW020066, AA613715, AA461400, AI917637, AW192488, AW021810, AA315269, AA677120, AI783695, AA554460, AI589498, AW378298, AW384566, AW007451, AA461087, AI816732, AW264471, AW368463,	



1532	H2CBX36	876560	nucleotide residues shown in SEQ ID NO:1531, and where b is greater than or equal to a + 14.	AW368530, AI341438, AW378317, AI290266, AW368521, AI280695, AW384490, AI418400, AI970613, AI160977, AW023591, AA947181, AW243772, AI040737, AA055400, AW316636, AA962716, N71882, AI376268, AW384491, AI076554, AI952506, AA257017, AA490466, H88912, N69323, AI912481, AA055599, N67469, M86849, I74304, X51615, M81445, M63803, U43932, AF144321
1533	HSHAX43	876572	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1144 of SEQ ID NO:1532, b is an integer of 15 to 1158, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1532, and where b is greater than or equal to a + 14.	AA587891, AA748293, AA313745, AW449668, U84007, U84009, U84010, U84008, U84011, L10605, M85168, AB035424, AB035422, AB035425, AB035423, AB035421
1534	HCRQI57	876575	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by	H66220, AA809449
				AI361150, AI939490, AW089648, AF002993

1535	HCVBL73	876576	<p>the general formula of a-b, where a is any integer between 1 to 887 of SEQ ID NO:1534, b is an integer of 15 to 901, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1534, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1138 of SEQ ID NO:1535, b is an integer of 15 to 1152, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1535, and where b is greater than or equal to a + 14.</p>	<p>AI744557, AA831793, AI813443, AA480937, AI110686, AA305609, AA521155, AW025562, AI640749, H96495, AA281170, AA987634, AA836072, AA279428, AI671472, AI077333, AI538508, AA480878, H24707, AA554436, AA280869, AI290360, AA968618, AW104195, AI762018, AI863656, AI910555, H24708, AA329735, D80195, D81026, C14389, D80166, D81030, D80522, D80133, D80045, D80164, D59502, D80212, D80193, D80251, D80269, D80248, D59467, D59275, D80022, D80227, C15076, D59619, D80210, D80240, D51060, D51423, D50979, D58283, D80366, D59859, D80391, C14331, D59787, D51799, D80253, D80038, D80043, D80219, AA305578, D80302, AW377671, D80196, D80024, D80188, D51022, D50995, AA305409, AA514188, D59927, D57483, D59610, D80378, D59889, C06015, C14014, D80268, AW360811, D80241, C14429, AW177440, AA514186, D80439, AW178893, D80247, D59373, D59627, AW375405, T03269, D80157, AW179328, AW360834, AW366296, C75259, AW360844, AW360817, AW375406, D51103, AW378534, AW179332, AW377672, AW179023, AW178905, AW378532, AW178906, AW177501, AW177511, C05695, T11417, D51759, AW377676, AW352171, AW178762, AW352170, AW177731, D59653, AW178907, AW378528, AW179019, AW179024, D80132, AW176467, D51250, AW360841, AW178775, AW177505, AW367967, D80134, AW179020, AW178909, AW177456, D58253, AW179329, AW178980,</p>
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1537	H2CBG53	876580	<p>nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1518 of SEQ ID NO:1536, b is an integer of 15 to 1532, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1536, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 468 of SEQ ID NO:1537, b is an integer of 15 to 482, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1537, and where b is greater than or equal to a + 14.</p>	<p>AW372745, AA121349, AI097133, AI310351, AI222028, AW073286, AI160271, AA121301, AW170797, AW388634, H69344, AA278853, AW372735, H47623, AA742972, AA864447, N31288, AW372730, AI572193, AA173309, AW188877, H69345, AW363751, AW372731, AW372736, H47925, AI476011, AW372742, AA278420, AW372739, AW372744, H38254, N22901, AA278794, AA769896, AW372740, AW372786, AW372738, AL040673, AF132937</p> <p>AA307226, AB020236, AF045449</p>
1538	HCYBF23	876581	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 709 of SEQ ID NO:1538, b is an integer of 15 to 723, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1538, and where b is greater than or equal to a + 14.</p>	<p>AA919119, AI949966, AA687405, AA588150, AA721257, AW028336, AA305220, AI522235, AA827201, AW298461, AI220695, AI984660, AI219204, AI026116, M84722, M84721, D12775, D85596, U90888, M84720, D31636, U29910, D88988, D31634, U29907, D31637, U29911, D88989</p>
1539	HODCO80	876583	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a</p>	<p>AW076027, R24903, R32458</p>

1540	HCVBG67	876588	nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 923 of SEQ ID NO:1539, b is an integer of 15 to 937, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1539, and where b is greater than or equal to a + 14.	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 357 of SEQ ID NO:1540, b is an integer of 15 to 371, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1540, and where b is greater than or equal to a + 14.	AA305259, L37080, Z47553
1541	HCVBI10	876589	nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 892 of SEQ ID NO:1541, b is an integer of 15 to 906, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1541, and where b is greater than or equal to a + 14.	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 892 of SEQ ID NO:1541, b is an integer of 15 to 906, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1541, and where b is greater than or equal to a + 14.	AA446378, AA305361, AA502360, AI912345, AA903395, AW377671, D80522, D81026, D80133, AW177440, AW360811, AW375405, AI262837, D80248, AW178893, T03269, C14389, AW179328, AW177501, AW177511, AW352117, D80251, D80269, AW366296, D80366, D58283, D59859, D80022, C14331, D80166, D80195, D80193, D59927, D59467, D51423, D59619, D80210, D51799, D80391, D80164, D59275, D80240, D80253, D80043, D59787, D80227, D59502, AW378532, AW360844, D81030, AW360817, D80212, AW375406, D80196, D80188, AW378534, D80219, AW179332, AW377672, AW179023, AW178905, AA305578, C15076, D80038, D59610, D57483, AA305409, C14429, D51022, D50979, D50995, D59889, AW178762, D80024, D80045, AI905856,

1542	H2CBE01	876591	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 965 of SEQ ID NO:1542, b is an integer of 15 to 979, where both a and b correspond to the positions of</p>	<p>D51060, AW176467, D80378, AW352171, AW377676, AW352170, AW177731, AW178907, AW178775, AW179019, AW179024, AA514188, C14014, D80241, AW178906, AW352158, AW177505, AW179020, AW178909, AW177456, AA514186, AW179329, AW178980, AW177733, AW378528, AW178908, AW178754, AW179018, D80132, AW178983, AW179004, D80268, C75259, AW360834, D80302, AW178914, AW178911, AW367967, D80134, D80439, C05695, AW178774, D80247, C06015, T48593, D51097, D51103, D58253, AW177723, AW352174, D80157, AW367950, AW378533, AW178986, D45260, D80314, AI535850, AI525913, AI525923, AF078165, AF205888, AF205889, A98521, X82626, A78862, A84916, A67220, D89785, A62300, A62298, Y17188, D34614, D26022, D88547, AJ132110, AR018138, X67155, AF058696, A25909, Y12724, AR008278, AB028859, AR025207, A94995, AR008443, I50126, I50132, I50128, I50133, AR066488, A82595, AB012117, AR016514, D50010, AR060138, A45456, I18367, A26615, AR052274, Y09669, AR060385, AB002449, AR066487, AR038669, A43192, A43190, A30438, A85396, D88507, AR066482, A44171, AR066490, A85477, I19525, A86792, D13509, AR008408, X93549, Y17187, AR060133, A63261, A70867, AR062872, U79457, AR016691, AR016690, U46128, AR008382</p> <p>AA307067, AA827296, AA307068, AA972507, AA074169, AL134865, AA096156, AA247393, AA091519, I81218, U30872, U19769, I35495, AF194970</p>
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1543	HCVBI92	876592	nucleotide residues shown in SEQ ID NO:1542, and where b is greater than or equal to a + 14.  Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 287 of SEQ ID NO:1543, b is an integer of 15 to 301, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1543, and where b is greater than or equal to a + 14.	R24666, AA305450, M63635, M64590, D90239
1544	HWMCC2 8	876595	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 638 of SEQ ID NO:1544, b is an integer of 15 to 652, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1544, and where b is greater than or equal to a + 14.	AI690065, AI480300, AA927896, AI288678, AI343570, AI343569, AI678924, AW339479, AA836387, AA836420, AC006011
1545	HWMAN6 1	876596	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2222 of SEQ ID NO:1545, b is an integer of 15 to 2236, where both a and b correspond to the positions of	AA583339, AI587061, AW192901, AA307800, AA315469, AA568218, AI150400, AA583146, AW374998, AI955582, AW374874, AI832775, AA345780, AA295520, AW360893, AA294858, AI445680, AW360892, AW360931, AA295782, AF102542, AF038650, R32988, H99036, N39174, N45249, N62843, W60278, W79341, W79441, W93292, W93293, W92077, W92073, AA083227, AA102315, AA11889, AA121668, AA121740, AA505444,

1546	HCQCR04	876597	nucleotide residues shown in SEQ ID NO:1545, and where b is greater than or equal to a + 14.	AA528215, AA574144, AA738177, AA934667, C20604, AA706803, AA781330, AI015034, AI311392, AI359257, AI360138, AI383772, AI422649, AI582783, AI127637, AI129439, AI130855, AI203460, AI208460, AI610103 W79201, AC006001
1547	HWMFE48	876600	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 342 of SEQ ID NO:1546, b is an integer of 15 to 356, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1546, and where b is greater than or equal to a + 14.	AA813252, AI911238, AI186148, AI743777, AA868390, AI004989, AI808771, AA838553, AA654365, AI911106, AI092279, AA769822, AA523966, AI955005, AI034008, AW085738, AI302130, AI285082, AA158037, AI991179, AI954918, AI167941, AI738706, AA524173, AA887784, AA552303, AI424977, AI024177, AI051807, W56741, AI720296, AI672956, R99385, AA594882, W85752, AA315098, AW382098, N90665, AA778392, D31212, T65680, AA465630, AA158328, AA641295, AA928364, AA812254, AI351201, W20284, AW382084, AI383689, AA215354, AI873941, AW382340, AA639464, AW382339, AW351859, U17077, U17079, U17080
1548	HMTBN44	876601	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a	AI446030, D62937, AA344217, AI950787, D62979, D79906, AW151367, AW151360



1549	HCROI04	876602	is any integer between 1 to 1409 of SEQ ID NO:1548, b is an integer of 15 to 1423, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1548, and where b is greater than or equal to a + 14.	M63806, AF035406, M96066, S68616
1550	HTWCT64	876608	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 443 of SEQ ID NO:1549, b is an integer of 15 to 457, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1549, and where b is greater than or equal to a + 14.	AW118825, AI582268, AI924840, AI686918, AI689468, AI565967, AI471821, AW167093, AW438815, AI560103, AW192267, AI351758, AI204255, AA948069, AA775662, AI160736, AA975121, AI347454, AW381442, AI086345, AI805695, AA441899, AW132052, AA233648, AW204634, AI470694, AA464178, AA693693, AI061108, AW028857, N90723, AI275105, AI290106, AW130518, N33172, AA031928, AA476308, AI682854, AI358603, AI332311, AW381443, AI696369, AW381398, AI472619, AI383588, AA404636, AA180763, AA233637, AW381420, AA032029, AI559765, N90350, N44956, W06927, AA182891, C05190, AA883620, AI696426, AA618268, D90034, E01793, E01792, E01791, D28915, D28914, D28912
1551	HETBI79	876609	Preferably excluded from the present invention are one or more	AI346674, AI348020, AI890197, AW291166, AA167382, AA700159, AI347083, AI056234,

			<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2526 of SEQ ID NO:1551, b is an integer of 15 to 2540, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1551, and where b is greater than or equal to a + 14.</p>	<p>AA535792, N76634, AA815232, AI343929, AA490536, AI696964, AI392769, AI346881, AI613246, AA809480, AI318395, AI761658, AI140011, AW190983, AW070699, AA488989, AW291783, AI285896, AA627444, R84232, AI674736, AI280867, H72489, AA488770, AA813879, AI685538, AI858181, AW006758, AA167381, N54554, N71216, AA971023, AA704201, AI612846, AW294335, N22015, R10105, AA744665, AI680111, AI361708, AA313609, N75553, AA337910, H72889, AI689838, R87634, AI867541, AW015119, R38671, R00317, AA548940, AI886417, T98789, W05347, AA337673, T98788, F10720, AI910396, AW374767, AC004687</p>
1552	HWTBM65	876610	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 594 of SEQ ID NO:1552, b is an integer of 15 to 608, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1552, and where b is greater than or equal to a + 14.</p>	<p>AW137982, AI686316, AW137243, AW193522, AW373055, D79340, AI796896, AC004079</p>
1553	HCQBN77	876612	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 770 of SEQ ID NO:1553, b is an integer of 15 to 784, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1553, and where b is greater</p>	<p>AA908796, AA431249, AI743453, AI433466, AI613002, AW302156, AA758918, AA595771, AA432263, AA887241, AI459626, AA931083, AI522039, AA707461, AI612992, AA834959, R50375, AI004115, AI203186, R48003, R48117, L47334, AC005324, AA976609</p>

1554	HKAED74	876621	<p>than or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 1917 of SEQ ID NO:1554, <math>b</math> is an integer of 15 to 1931, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:1554, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	<p>AI796510, AA478680, AI972505, AA418501, AI917358, AI923250, AA210747, AI652196, AI652382, AA418404, AI683375, AI224156, AA844697, AA668890, AA315808, AI168734, AI374795, AI469242, AA814749, AI368714, AI347251, AA171797, AI745538, AA450160, AA495861, AI831534, AI206300, AA428536, W95434, AA831973, W95561, AI189412, AA688156, AI867333, AI867770, AI199241, T75325, AI089175, AA479220, AA443765, AA406142, F12995, F13001, T19179, F10596, AA424821, T90046, T19289, T75402, AA776218, F10590, AI868932, AA211708, AI539664, T90147, AA367325, AA428537, AA296374, AA307446, AA171681, AI793116, AI793143, R39216, AF048686, AJ006068</p>
1555	HCQAT20	876622	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 380 of SEQ ID NO:1555, <math>b</math> is an integer of 15 to 394, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:1555, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	<p>D81622, D60051, H57196, AI125536</p>
1556	HCRMD40	876630	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 332 of SEQ ID NO:1556, <math>b</math> is an integer of 15 to 346, where both <math>a</math> and <math>b</math></p>	<p>AL044257, W40373, AW250560, AA643353, AI991172, AA402608, AW249124, AI554578, AW328561, AW246456, AW051430, AA308337, AI346750, AW166193, AA703840, AI143755, AI951822, AW080812, AI189652, AI885695, AW166148, AW082817, AI953814, AA602780, AI951334, AI191618, AW248692, W45258, AA503856, AI378866, AA916922, AI089026, AA599791, AA032143, H48844,</p>

1557	IIFIHO78	876631	correspond to the positions of nucleotide residues shown in SEQ ID NO:1556, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1563 of SEQ ID NO:1557, b is an integer of 15 to 1577, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1557, and where b is greater than or equal to a + 14.	AA402390, AI192449, AA826583, AW070627, N39330; AF004876  AW150197, AA846471, AI146351, AI276560, H96798, AW016664, AA253395, W07219, H97716, M63896, L13853, S74227, L06865
1558	HCRPG35	876633	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 264 of SEQ ID NO:1558, b is an integer of 15 to 278, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1558, and where b is greater than or equal to a + 14.	AC004030
1559	HSQFQ92	876637	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 737 of SEQ ID NO:1559, b is an integer of 15 to 751, where both a and b	AI750171, AI692181, AI275606, AI453065, AI521837, AI634107, AW130839, AI654841, AA424967, AA059190, AA047896, AA148675, AW085538, AA026771, AI261336, AI696507, AA992863, N66291, R85666

1560	HUFBF32	876638	<p>correspond to the positions of nucleotide residues shown in SEQ ID NO:1559, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1924 of SEQ ID NO:1560, b is an integer of 15 to 1938, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1560, and where b is greater than or equal to a + 14.</p>	<p>AL134555, AI925308, AI625207, AI969783, AW262828, AW263812, AI685887, AA206222, AI086025, AI284055, AA143639, AI268485, AI312871, AL134554, AA969162, AI282923, AA074267, AA206652, N33991, N22039, T09372, AI760417, AA146631, AW083343, AI479411, AA742178, AW054790, AI586977, AI948545, AI991591, T59451, AI565918, AI572624, AA627495, AA236672, AI798559, AW291470, AA292449, AA593202, T58112, AI815717, AI698280, AI432649</p>
1561	HTXCO05	876643	<p>correspond to the positions of nucleotide residues shown in SEQ ID NO:1561, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 875 of SEQ ID NO:1561, b is an integer of 15 to 889, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1561, and where b is greater than or equal to a + 14.</p>	<p>AW411282, R08081, AA307047, T98713, AW351792, AA325934, AW375839, AI694682, AI968390, AW370749, AW370756, U43431</p>
1562	HWMBJ09	876645	<p>correspond to the positions of nucleotide residues shown in SEQ ID NO:1562, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1371 of SEQ ID NO:1562, b is an integer of 15 to 1385, where both a and b</p>	<p>AW337919, AA523430, AL044577, AW194215, AI686556, AI671043, AA652193, AI815222, AI694846, AA480192, AI289064, AI910616, AI923986, AI557645, AI799943, AI077441, AW007863, AA481900, AI123788, AW024224, AI355044, AW130857, AW054917, AA552445, AA923164, AA300093, AI686879, AI240984, AI625429, AI446337, AI557649, AI557647,</p>

1563	HSIDP84	876646	<p>correspond to the positions of nucleotide residues shown in SEQ ID NO:1562, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 848 of SEQ ID NO:1563, b is an integer of 15 to 862, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1563, and where b is greater than or equal to a + 14.</p>	AA524488, AI557652, AI557651, AI557653, AA579950, AW338240, AI557650, AA480098, AI557656, AI557654, AI557655, AI557648, AA994813, AL044578, AI383197, AA910275, R05862, AA887744, R05776, AI940377, AA594829, AA858443, AI557657, AW337931, AW057864, AI720420, AI557646, AW363060, X87342 W61002, AW316845, AI674913, AI678011, AW190676, AI623768, AI934315, AI692242, AI023791, AI935868, AI934327, AI818628, AI589269, AI520775, C05899, AI598121, H58247, AW007303, AI703259, H70829, AI598076, H61582, H70828, AI932542, AI582914, AI587377, AI565896, AI445979, H94487, H79481, AI888892, H61583, M84424, J05036
1564	HUSIA29	876647	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 3093 of SEQ ID NO:1564, b is an integer of 15 to 3107, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1564, and where b is greater than or equal to a + 14.</p>	AW173342, AA478670, AI968093, AI379615, AI634726, AW338720, AW104590, AI683681, AW169497, AI421606, AA694059, AI970918, AI432425, AA258286, AA234386, W49607, AI417965, AI359750, AI672733, AI094753, AI359735, AI421216, AI421807, AI492071, AW169163, AA406244, N50451, AI400745, AW051859, AI770144, AI418973, N94584, N22975, AW009450, AI423399, AI522259, AW150839, AI358559, AI688047, AA970514, AI768455, AA305807, AW243536, AI399686, W49640, AI280345, AA703127, AI632111, T63353, AI865130, AI474045, H47786, AI274468, AI341413, AW016684, AI399864, AA694012, AI097106, AL040613, AW182238, AA431110, R14723, R06613, AA972500, AW342058, AA887754, AW086061, AI026763, W23791, AI205812, AA232656, R67689, AA972808, Z45677, R36481, AA479212, AI567031,

1565	HCQAG09	876648	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 286 of SEQ ID NO:1565, b is an integer of 15 to 300, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1565, and where b is greater than or equal to a + 14.</p>	<p>R62535, R84588, N50507, AA969851, T97034, AA649044, AA315207, AA649043, AI471105, AI086675, R36482, AA613263, AI051650, Z41345, R42442, AI074320, R66089, AA812544, R06604, T96927, R06660, N32390, AI868697, R06669, AA432124, N79367, T63677, Z20112, AA883725, AI220180, AC004711, AB020684, AJ011911, AC005271, A74567, AA770028</p> <p>AF061056, AF084644, AF084645, AJ009936, AF188476, AF182217, AJ009937</p>
1566	HCROT53	876649	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 523 of SEQ ID NO:1566, b is an integer of 15 to 537, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1566, and where b is greater than or equal to a + 14.</p>	<p>U17105, Z36714, U20612, Z47766, U20636</p>
1567	HOENX50	876652	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by</p>	<p>AF039023, AC006432</p>

1568	HCEOW20	876656	<p>the general formula of a-b, where a is any integer between 1 to 319 of SEQ ID NO:1567, b is an integer of 15 to 333, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1567, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 635 of SEQ ID NO:1568, b is an integer of 15 to 649, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1568, and where b is greater than or equal to a + 14.</p>	AA985339, AA325781, AA041430, AC005531
1569	HCRMG16	876657	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 379 of SEQ ID NO:1569, b is an integer of 15 to 393, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1569, and where b is greater than or equal to a + 14.</p>	299757
1570	HCEPH79	876660	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by</p>	AA326212



1571	HFOYY56	876666	<p>the general formula of a-b, where a is any integer between 1 to 552 of SEQ ID NO:1570, b is an integer of 15 to 566, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1570, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1643 of SEQ ID NO:1571, b is an integer of 15 to 1657, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1571, and where b is greater than or equal to a + 14.</p>	<p>AI828664, AW189077, AA186731, AA058868, AA723578, AL121358, AI221227, AI093392, AI138553, AW019870, AI803661, AA826404, AI004869, N67735, AI188839, AI474328, N64380, T71617, AI630399, AL120719, AA127002, AW386045, AA243169, N70412, N40572, AA977240, AI798975, H41757, H41758, AL046756, H40420, H50495, T91967, N44609, AA125926, H14602, AI950747, H20721, H72253, R10731, AW382088, AA069491, R44126, AI472460, AA045529, AA731653, AW366585, AI148840, AI373402, W58735, N35135, AI889177, AA127021, H71690, AA069453, AA125758, AI312614, AB006965, AF000430, AF061795, AF151685, AF019043, AF107048, AF132727, AF020212, AF020211, AF020213, AF132939</p>
1572	HSXDG80	876668	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1172 of SEQ ID NO:1572, b is an integer of 15 to 1186, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1572, and where b is greater than or equal to a + 14.</p>	<p>N76733, H97908, AI765923, AA100164, AI161123, AI269285, N45309, AI379293, AA026656, AA425856, H06713, AA628959, N54759, AA323052, AI123671, R78485, AA317233, N88108, T92033, T84742, AW263910, AI400524, AA628884, AW275553, AI039362, R78527, AA249635, AI041425, N52791, AI699248, AA223953, AI191006, N59264, AB020715</p>
1573	HHEUK77	876675	Preferably excluded from the	AA313261, AA300475, AA133237, AI768979,

1574	HHEDO14	876677	<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 711 of SEQ ID NO:1573, b is an integer of 15 to 725, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1573, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1121 of SEQ ID NO:1574, b is an integer of 15 to 1135, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1574, and where b is greater than or equal to a + 14.</p>	<p>AA580098, AA233499, AA314374, AW408727, AA094260, AI751632</p>
1575	HKIMC75	876680	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 845 of SEQ ID NO:1575, b is an integer of 15 to 859, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	<p>AI189206, AI689297, AL037493, AW169116, AA648307, AA062916, AW292736, AI198589, AA902957, AI277799, AA767327, AI311067, AA937974, AA634429, AI004727, AI299652, AA032043, AA862157, AI291351, AA862156, AA181981, AA993666, AA991222, NS2079, AA496026, AI000697, AI581889, AW342034, AI972961, AA948363, AA258118, AI971556, N89925, AA041553, H49505, AI017756, AA031961, W19241, F02366, F08820, R22625, H73943, R09488, AI472632, AA748836, AI262706, AA436938, AA877698, AA187708, AA081668, H94003, H49504, H73988, AA244456, AA259104, H95020, AA082449, F11149, F06110, R53670, X77743, X77303, X79193, L20320, Y13120, U11822, X74145, X83579, X57239, X65070</p> <p>AA193161, T10237, H11797, D44986, R25550, T77684, R91095, H15636, Z42961, R17883, AA371122, AL035427, AF035288, AC007262</p>

1576	HW/MBI36	876683	NO:1575, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 718 of SEQ ID NO:1576, b is an integer of 15 to 732, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1576, and where b is greater than or equal to a + 14.	AI435038, AI912169, AI701595, AI628945, AI819240, AI361891, AI057030, AI808292, AI478205, AA933801, AA633552, AI830350, AA513475, AI093856, AI566604, AI559922, AI000612, AA587035, AI222881, T27670, AI308944, AI308779, AA948404, AI346156, AA857101, AI539010, AI871676, AI628889, AI344797, AA865820, AI658897, AI475182, AW082952, AW102783, AI346307, AI972243, AL045929, AI682106, AI344182, AI590482, AI345860, AI569870, M16937, S49765
1577	HE8TM64	876685	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1622 of SEQ ID NO:1577, b is an integer of 15 to 1636, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1577, and where b is greater than or equal to a + 14.	AI751497, W25812, AA307338, AA305326, AI367808, AA332338, AA545813, AA047778, AI251787, AL045193, D30819, AA319757, AW293922, X68199, X69987, L00923, AJ001381, AJ001382
1578	HKLSA57	876687	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 645 of SEQ ID NO:1578, b is an integer of 15 to 659, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID	

1579	HOGCV45	876689	<p>NO:1578, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1852 of SEQ ID NO:1579, b is an integer of 15 to 1866, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1579, and where b is greater than or equal to a + 14.</p>	<p>AA971761, AA316125, AA779730, AI342295, D82512, D82209, D82400, AI928195, R59543, R51409, Z43988, F11900, T65476, AA081963, AA304478, T65486, D82182, AA188083, X84373, AR031997</p>
1580	HADCX04	876690	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1482 of SEQ ID NO:1580, b is an integer of 15 to 1496, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1580, and where b is greater than or equal to a + 14.</p>	<p>AI824012, AA768896, AI400750, AW291960, AA449520, AI446344, AI911295, AA482984, AA677454, C75000, AA211913, AA449089, AL039130, AI086104, AA809866, AA814760, AA206769, R51297, Z40045, R59544, T65401, AW440101, AW197032, AA280932, T65412, D81782, R59543, AI916155, F09547, AA206804, AA304478, AA743706, C75037, AA209222, Z43988, R51409, F11900, AA316125, T65476, X84373, AF053062</p>
1581	HCRPH70	876693	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 3884 of SEQ ID NO:1581, b is an integer of 15 to 3898, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	<p>AI452523, AI478635, AI744981, AI560901, AI565588, AI798581, AI814640, AA653662, AA421151, AI660891, AW444552, AL039553, AI745043, AI570244, AI333562, AA205872, AI719554, AI149680, AW439417, AI921227, AA694055, AI601268, AA316992, AI393735, AW190924, AA838650, AI269927, AI095118, AW151035, AI769469, AW337209, AI025693, AA969146, AA577235, AL039554, AI049679, AA936325, AI242821, AA814514, AL121252,</p>

1582	HCRQM22	876696	<p>NO:1581, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 433 of SEQ ID NO:1582, b is an integer of 15 to 447, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1582, and where b is greater than or equal to a + 14.</p>	<p>AW376485, AW131188, AW192413, AL121316, AW014973, AA101068, AL039574, AW131134, AA573629, AA102113, AA961055, AW374678, AA194838, AW178971, AA344374, AW374624, AI183708, AA740187, AI537228, AA226093, R68854, H10750, AI802500, AA225947, AA397942, H13519, AW361330, AI208657, H25331, AA814957, AA618264, AA344846, AW380100, N75624, AA372640, F05661, AA206235, AL046083, T54750, AI701306, AA586552, AI857281, AI202213, H11029, H07142, AA206013, AI141812, AA352818, AI307792, R68760, AW374474, F08374, AA344845, N22383, AA353560, AI869073, AI762329, F01918, AA373973, T54663, N88370, AA092897, AA206054, AI040829, AA356450, R43483, AW374484, H06635, AW389283, AI749924, F04601, T19805, AA082735, AW273597, AW374506, AI557427, AA857322, AI721273, AI423660, AA302091, AA181082, R17993, AW360799, H13417, AA977862, H13460, H13520, AW360925, AI206966, AI206949, AI655406, I32959, X53586, X59512, I32960, X69902, X56559, AF166341, S66213, S66196, I32962, I32961, S52135, AF166343, AF166342</p> <p>AW403014, AI904490, AI831848, AA115313, AI761315, L16783, U74613, U83113, AR030545, A79030, U74612, AC005841</p>
1583	HKAEB15	876697	<p>Preferably excluded from the present invention are one or more</p>	<p>AL036025, AW170264, AI752535, AI005255, AI983435, AW246157, AA830412, AA100899,</p>

			<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1260 of SEQ ID NO:1583, b is an integer of 15 to 1274, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1583, and where b is greater than or equal to a + 14.</p>	<p>AW029286, AW249623, AI817149, AI188189, AI080559, AI351548, AI800612, AA053203, AI472277, AA514834, AI805161, AW190531, AI674923, AI126935, AI692174, AW338703, AI298396, AA100900, AI371893, AA614754, AI280045, AA775722, AA748994, AW340009, AW021825, AW079812, AA687655, AA157990, AI335523, H28772, AA053118, AA179129, R98683, F37299, AA490300, AA128782, AI222643, AI971507, AA158221, W22913, AI808088, AI241313, AA128683, W75952, AA490392, AA937369, W70210, F27137, AI420918, R98910, AA878476, AA835695, D61351, T47481, AI698637, AA568407, AI114611, AA918093, AI873390, AA191377, AA352963, AA845387, AA206840, AI886265, T99184, AA179130, AA375818, AA190767, H19574, H92872, AA317262, H46433, AL110366, AA852372, AA318585, AA024678, F15781, H19492, AI356724, F29453, T82979, AA024463, H28745, AI864085, AA732079, AI701200, F31250, T47480, AA380664, D61207, AA206841, AA527568, AW087408, T99183, AI345010, AW152550, AI890507, AI815237, AI078510, AA715307, AA809974, AI520946, AA761557, AI445992, AI659795, AA641818, AW075608, AA857847, AW327325, AI860674, AA748353, AW090087, AI567971, AI433976, AL045413, AI860783, AI963172, AI590043, AI624543, AI064830, AI440238, N29277, AL038529, AW088037, AL038645, AW075084, AI310925, AW161202, AI538885, AI828574, AW161579, AI567582, AI289791, AI471429, AL120700, AW151136, AA659314, AI539771, AL121270, AI432644, AW162194, AI537677, AI494201, AI500659, AA425228, AI866465, AI540674, AI815232, AI801325, AL036652, AI500523, AI537617, AI538850, AI887775, AI270350, AI582932, AL043168, AI923989,</p>
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AI872423, AI284517, AI500706, AI890576, AI445237, AI491776, AW151138, AI521560, AI889189, AI623799, AI500662, AI539800, AW172723, AI582912, AI284509, AI889168, AI440263, AI927233, AI866573, AI633493, AI434256, AI252414, AI866469, AI273179, AI805769, AI434242, AI888661, AI312364, AI500714, AI284513, AI345180, AI888118, AI285439, AI859991, AI436429, AL079799, AI355779, AI889147, AI623736, AI581033, AI371228, AI334884, AI491710, AI440252, AI431307, AW269098, AL047422, AW268251, AI114703, AI866786, AI860003, AI610557, AI431316, AI433037, AI242736, AA808175, AI887499, AW151979, AI539781, AI364788, AI867068, AW268768, AI702065, AI539707, AI885949, AW089557, AI559957, AI285419, AI500061, AI521571, R65859, AI469775, AI866581, AW079432, AW089562, AI567953, AI815150, AI446495, AW131331, AW193530, AA845354, AI445620, AI671642, AI816055, AC004922, U26541, I19368, I19367, U65960, U72620, E08631, AL137480, Y10080, AL080124, S63521, AL110221, I48978, AF132676, AF061836, AJ242859, Z72491, U92992, I89947, AF153205, AJ012582, L19437, A08907, AL122049, A08913, E02914, AF151109, Z82022, A08912, S77771, AL122093, A03736, AL137479, A08910, A08909, A08908, S76508, AL137271, AF017152, AL133049, AL110280, AB019565, AI8777, A77033, A77035, X70685, X52128, AL050149, AF061573, AL133072, S68736, AI8788, X93495, AF067790, I89931, AF215669, A76337, D89079, A08911, AR038854, I41145, I49625, AF113694, S83456, A07588, AL117587, AL049382, AF126488, AL023657, AL137533, X99717, AF102578, AL133619, X65873, E03671, AF079763,				
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	A76335, AF118090, E02349, AL117435, E02253, AL133010, I89934, AL117432, AL133565, AL133606, S78214, AL137539, AL122110, AF100931, AL137526, A65340, X79812, AL133080, AL133081, AF192557, AL133075, U72621, AL080163, AL122121, A08916, AF078844, AL137429, AF175903, AF065135, AJ238278, U87620, AL133014, AJ005690, AF182215, AF115410, X72889, AF113677, I48979, U66274, E06743, U78525, AF115392, AL080126, AL137550, A58524, A58523, AL133104, AL133067, AL133077, AL050277, AF118094, A65341, U58996, AL080074, AL049466, AL133557, AL137529, AL110158, AF090903, AL050155, AL137665, AF169154, Y10655, AF113690, AF090934, AF104032, AF067420, X06146, Y09972, AL117583, M86826, AB007812, M27260, AF061795, AF151685, AL110222, AL133054, X63410, S75997, AL133093, AL133558, I26207, AL050172, AF017790, AL080158, E01314, AF090900, AF125948, AL096744, AL050393, AF106862, AF081195, E07361, I89944, AL133560, AL137537, AL049283, AL117460, AF109155, M96857, A58545, U57352, AL050108, AF004162, AL137488, AC004200, E01614, E13364, Z97214, AL133112, U88966, AL117648, AF162270, AR068751, AL137627, AF207750, A57389, AF118064, AL137478, AC004383, I33392, D44497, AL137530, AL133640, AL117626, AF143957, U95114, AL137459, AL137711, AL050116, AL137558, A08915, AL110225, AL122118, AL050092, X72387, AL050138, U42766, A15345, AF106945, AF091084, X82434, X66862, AR009628, AF118092, AF120268, AF094480, AL137471, AL049452, AF044323, AJ010277, AF090901, AF137367, U35846, AC003032, AL137300, AF002985, I80064, AF114818, AL049464, L13297, Y16645, AL049300, A86558, AB029065, AF097996, E04233, Y11254, AR029490, AL122106, AF111851, I46765



1584	HSYAP76	876701	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 484 of SEQ ID NO:1584, b is an integer of 15 to 498, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1584, and where b is greater than or equal to a + 14.</p>	AW411543, AL039599, AI351337, AI826980, AA160380, N67961, AI378493, AI951298, AI090558, AI348126, AA478324, AI200956, AA644040, AW024189, AA587243, AI812050, AI362845, F29594, AA776518, AA789114, AA931516, AI003566, AI707494, AA970343, H11327, AA947278, AA076341, AA915984, AI299557, AW299825, AA024520, AA258801, AA169301, AA342232, AA484880, W90755, AA516277, AI015269, R53617, AA113377, AI379669, AA829839, AA876766, H05518, AA053830, AI991853, AA810454, AI766365, R85352, AA502109, AA922383, H09142, AI680956, R69168, AA865843, H85022, AI886514, AA215481, R06394, AA524191, AA074146, AI638009, R76047, AA528723, F19676, AA588290, N56241, N75886, R22963, AW090423, AA088341, N22109, R75873, AA508387, N98357, N67304, AA749208, AA355684, AA258709, R87295, AI192394, AA477680, AA765589, AI886515, AA302356, AA670313, H11756, AA236894, AA304541, AA417858, AW167222, R51947, AA307613, AA478268, AA641818, AI252414, AI312364, AI244249, AI345180, AW269098, AW268251, AI348870, AW268768, AW073865, AI670009, AI473536, AI538259, AW409772, AI307604, AI433157, AI702073, AA838230, AI500061, AW084056, AI633125, AW152182, AI887308, AI872910, AL045500, AW020397, AW079432, AL040184, AI648454, AI766348, AL036631, AW162118, AW051088, AI698391, AI915291, AW088691, AI859991, AI582932, AI872423, AI889189, AI521560, AI866469, AW238688, W74529, AI281800, AI690748, AI569583, AI432030, AI610770, N75779, AI538564, AW161156, AI683173, AW089275, AA235825, AI623941, AI537677, AI890907, AI612852, AL046595, AI918435, AL047344, AI884318, AI569637, AA579618, AI868931, AA001397,
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	AI340519, R81679, AI860003, AI625079, AI890507, AI499621, AW268067, AI620003, N33175, AI963058, AA420722, AI471909, AL121365, AW198090, AI890214, R32821, AI612750, AL037649, AI627988, AL045163, AW151136, AI815232, AW103442, AW078839, AL037454, AL119828, AL036802, AI579901, AI538764, AL039274, AA502794, AA908294, AI863241, AW020095, AI499986, AI288285, AW083374, AI624293, AI590575, AI345745, AI950892, AI801325, AI500523, AI677796, AI537273, AL037030, AI611906, AI797908, AI500662, AI866770, AI888661, AL121564, AI498067, AW118518, AI241923, AI254727, AI366900, AW193850, AW022808, AW078735, AI889376, AI687362, AL038605, AI564719, AA693331, AI783530, AI580190, AI379711, AA505147, AI610895, AW160905, AI866465, AL037582, AI567582, AL037602, AI696612, AW163834, AF091555, U37408, AR014566, AJ010483, AB033122, AF067795, U35846, I48978, I89947, E04233, AR038854, AJ000937, Z37987, AF090900, E12747, S63521, I48979, A08913, AF087943, A58524, A58523, A08910, A08909, AL023657, AF090934, AF125948, AL137271, AF026816, AF111849, E07108, A77033, A77035, AF090943, AF158248, AL133113, A08912, I89931, AL050172, AL096744, AL080148, AL050393, AF057300, AF057299, I00734, I49625, E00617, E00717, E00778, AL133665, X72889, A08916, AF113694, Y10936, X70685, AF146568, AL122118, AR013797, AF113019, AF097996, I33392, AL049314, AF026124, AF090903, AL137533, AL137488, AL137476, AL133560, X81464, AL133067, AF028823, Y16645, AL049283, AL122050, AF079763, AL049347, AL050116, AL137558, AL137480, AJ012755, AL133080, AL110221, AL117457, AF061981,

1585	HCRMV17	876716	<p>AF104032, M92439, Y10655, AL137283, A65341, E05822, A08908, E06743, AF177401, U78525, AL137550, AL117435, A03736, AL110280, AL137557, AL080159, AF113699, Z82022, I46765, AF183393, Y14314, AL050149, AL133568, AF185576, Y07905, AL137294, S78214, AL122110, AL049300, AL050024, AL137478, E02349, AL137459, AL117460, AL050155, U88966, AF100931, AL110196, AL049430, AL137529, AL117394, AL137705, AF061573, AL137292, AL110159, X60786, AF132676, AL133640, AF061836, AL110197, X84990, A93350, AF039138, AF039137, AL133606, X83508, AL035458, AB016226, X82434, AF113677, L19437, AL050277, X72624, AL133075, X65873, AL137479, AR011880, A18788, A21103, AF091084, AF017437, AL117463, AL137523, AF061795, AF151685, AL133016, S68736, AF090901, AF106657, AF106862, S36676, AL049938, A18777, AR000496, U39656, AL080110, Y09972, AF090896, AF008439, AF098162, AF113013, AF054599, AF067728, AL117416, AF153205, A07647, I09499, AL050108, AF032666, S61953, X87582, Y11254, AL049382, AL117626, I17767, AJ238278, AL122100, AJ003118, AL050146, AL122093, AL050092, X98834, AL137463, AF113690, AL117644, X83544, AF111851, U58996, AL049466, AF090886, AL117440, AL110225, U80742, AF030513, AL050138, AL133031, AF102578, I42402, U00763, E03348, AF118094, AR038969, AL137538, AL080074, I03321, X59414, AF139986, U42766, AL137660, X53587, D83032, AF162270, X62580, AL117583, L13297, A12297, AL122121, AL122123, E15569, AL080124, AF119337, AF117959, AF113689, AF126247, A65340, U67958, AL137560, U67328, AL133081, AF151109, AL117649, E08631, AL133072, AL110222, AF079765</p>
			<p>AI492198, AA381672, W44823, AB002357, D26077</p>
			<p>Preferably excluded from the present invention are one or more</p>

1586	HOEKC59	876719	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 714 of SEQ ID NO:1585, b is an integer of 15 to 728, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1585, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1794 of SEQ ID NO:1586, b is an integer of 15 to 1808, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1586, and where b is greater than or equal to a + 14.</p>	<p>AI436209, AW026035, AI401315, AI446530, AA588136, AI591172, AA497132, AA927681, AA497055, AI951115, AI200036, AW238900, AI493315, AI400504, AI089283, AI925204, AW069539, AA857330, AI191461, AI378670, AA410339, AI472923, AA747530, AA766215, AA234951, AA988960, AA037081, AI246277, AI167513, AA704133, AI080251, AI055948, AA614812, AA130081, AI015171, AI493376, AA235125, AA825222, AA449908, AW206209, AA130080, AA029281, W25810, AA613492, Z44379, TI9354, AA406250, AA250960, N74300, T19203, AI417639, D82431, AI198426, R23635, Z40312, AW390845, D79780, D79680, R24115, AA455230, AW390828, D63116, AA465608, T10625, W51823, N88198, AA029425, AW390832, D19792, AA258657, AA449961, AA089740, AB003103</p>
1587	HKCSL28	876722	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 363 of SEQ ID NO:1587, b is an integer of 15 to 377, where both a and b correspond to the positions of</p>	<p>AI275539, AI299922, AI245421, AA872397, AI288931, AA927697, AI244692, AI378809, AA887588, AA917836, AA894628, AI299933, T28672, AL022315, M87842, M14079, M87859, M87860</p>

1588	HHEFB46	876725	<p>nucleotide residues shown in SEQ ID NO:1587, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1472 of SEQ ID NO:1588, b is an integer of 15 to 1486, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1588, and where b is greater than or equal to a + 14.</p>	<p>AI052256, AI126717, AW189938, AA745594, AI885180, AW070663, Z99376, AI014817, AW239211, AI784576, AW327439, AA524748, AW073683, AW276639, AA835672, AI608763, N36799, AW247076, AA627848, AI127547, AA740916, AW327258, AA166916, AA568685, AA828239, Z99375, AA700740, AW327612, AA812422, AA099018, AA761648, AI051506, AA573156, AI025865, AA503846, AA592898, AA160273, AA775540, AA451628, AI185757, AA768416, AA687268, AI371140, AI371046, AA074799, AW029151, AW250428, AI138225, AI089539, AI004126, AA809470, AI537332, AI073676, AI190076, AI278484, AA167073, AI127406, AA649193, AA721424, AA715174, AA978034, AA524391, AI923795, W88636, AA393865, AW403551, AA173982, AW362155, W73908, AI635344, AA856908, AA962673, AI024400, AA992622, AI167830, AA314538, AI031946, AI752947, AA100657, AI922493, H83589, AA593126, AA888675, R54097, AA031733, AI033288, AA506081, AI380802, AI491801, AI953284, AA085335, AA127405, AA515785, AI761093, AA076411, AA075012, AA305905, W76601, AI039462, AA450223, AA112634, AA082732, W74770, AW341032, AA725074, AA074990, AA009468, AA889213, AA565437, AW079297, AA099096, AI064753, AA027240, H00352, AA173626, AI380804, W88554, AA076267, AW105351, AA076266, W52167, AW021312, AA693887, AA164763, AI249663, AA031732, AA403080, R89292, R51433, AW327440, H02543, N52907, AA113337, AA127505, AI282747, AA164762, AA411811, AI459951, AA133539, AA514558, AI197787, AA160272, AW393147, AA314358, AA933718, C00036, AA639385,</p>
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1589	HWBBS84	876726	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 984 of SEQ ID NO:1589, b is an integer of 15 to 998, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1589, and where b is greater than or equal to a + 14.</p>	<p>F25558, H02544, AI696072, H71452, AA361575, R11641, AA115764, AI720134, R54151, AA588847, W73014, R99520, R89293, AA969406, AI797468, AA864670, AI083791, AA628031, AA974650, AA053334, AI379135, AI380120, AA058648, T27975, AA393799, AA738408, AA076505, H94038, AI126113, AA449655, AI686294, T47873, T73141, R16766, AA810517, T74664, R07722, R07723, AI300209, N45959, H47972, AI379137, AA903779, AA876048, AA320546, AA922980, AA782268, R10017, AA644180, R15278, AA356761, AI688217, R93621, AI476203, AI267797, AA027239, AA910612, AI201954, R09847, AW364121, AA179728, H47662, AW104377, AA872213, AI718364, AW166745, AA191273, AA492543, T83787, W24030, AW197934, T11052, AI686637, AW351540, N55602, AA127491, AA665178, W63552, AI143483, R99521, AA009700, R85393, T03064, F05216, F06634, T18456, H94124, M29536, X73836, AL031668, AC007934, AF076927</p> <p>AA775676, AA306997, AW299505, AA295175, AI660377, AI698467, AI925518</p>
1590	HSIFZ22	876728	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a</p>	<p>AI554023, AI913274, AW383970, AW383965, AW383954, AI539770, AI609013, AL043107, AW383974, AW383967, AW167072, AW383980, AI591170, AA001432, AI612801, AW129469, AI799420, AA001431, AW383968, AI978633,</p>

1591	HCRNB80	876731	is any integer between 1 to 2108 of SEQ ID NO:1590, b is an integer of 15 to 2122, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1590, and where b is greater than or equal to a + 14.	AW383979, AW380739, AI289788, AL041919, AI375787, AA888783, AI560125, AW383982, AI129128, AI073851, AI818814, AA157885, AA157573, AW365658, R53920, AW363206, AI590019, W67551, D29067, AA143454, AI273137, T29043, AI681062, AA862112, AW383985, R53921, AI609506, AI648445, C00135, D29068, AI567045, W67580, N74341, AW189660, AA143453, AI168413, D29362, AW383976, AW363205, AW392754, T25083, L34155, X84900, X84013, X84014, U61261, X85107, X85108 AI750182, S79871, S79910, U37431, S79869, AC004079, Z64816
1592	HTPAY47	876732	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 515 of SEQ ID NO:1591, b is an integer of 15 to 529, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1591, and where b is greater than or equal to a + 14.	AL045837, AW290917, AI925409, AW168903, AW068826, AI083568, AW026383, AW262903, AI926513, AI979214, AI890598, AI750592, AW339074, AA418236, AW029483, AW022107, AW295181, AA664461, AI752803, AI740606, AI147688, AA970819, AW068765, AI473816, AI751522, AI925816, AI459360, AI752768, AI752291, AA639417, AI460028, AI752525, AI750945, AI694639, AA599476, AW131293, AA242752, AI750659, AI889686, AI888426, N71781, AI357766, AW021892, AI755098, AA350793, AW067910, AA853461, AA298896, AI784082, AA853579, AA852453, AA852454, AA853800, AA307755, AI925501, AW021059, AA976657,

1593	H2LBA37	876743	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 675 of SEQ ID NO:1593, b is an integer of 15 to 689, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1593, and where b is greater than or equal to a + 14.</p>	<p>AW150473, AW166734, AA627471, R30650, AI752649, C01914, AL049389, AL109718, AB033025, I95744, AR053539</p> <p>AA315933, AA314510, AF121164</p>
1594	HWLIP86	876744	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 932 of SEQ ID NO:1594, b is an integer of 15 to 946, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1594, and where b is greater than or equal to a + 14.</p>	<p>AW024392, AF121164, AA863031, AA639871, AA954258, AA877523, AA741216, AI289873, AA515094, AA568880, AW272162, AA315933, AA314510, AW135907, AA887896, AA954266, AA577173</p>
1595	HGBAM79	876745	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 861 of SEQ ID NO:1595, b is an integer of 15 to 875, where both a and b correspond to the positions of</p>	<p>AA424088, AA419164, AI003828, T28640, H69474, Y00291, M96023, S56660, X07282, AF110730, AF110729, AF157483, X59473, I09352, I09359, S63196, X57340, X57339, X56674, X57341, M96022, I09358, M96021</p>



1596	HKAFU85	876747	nucleotide residues shown in SEQ ID NO:1595, and where b is greater than or equal to a + 14.  Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1243 of SEQ ID NO:1596, b is an integer of 15 to 1257, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1596, and where b is greater than or equal to a + 14.	AI346365, AA641709, AA627539, AI340146, AI909720, AA555216, C16952, AW014754, AA857163, AA975933, T29526, AI431323, AI269804, AW371982, T61465, D29449, AW268543, M30704, AR052268, M30699, M30703, AR052271, M30698, AR052272, M30700, Y09830, M30701, M30702, AR040760
1597	HNFE067	876750	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 927 of SEQ ID NO:1597, b is an integer of 15 to 941, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1597, and where b is greater than or equal to a + 14.	AW361809, AA775705, AW361849, AA6339664, AW361714, AW370643, AW361561, AW378536, AW378537, AW378541, AA088182, AI185232, AI679593, AW378535, AI831033, AW390710, AA043959, AA088652, AA968933, AA621368, AA628938, AA524822, AA043825, N21038, AW062555, AW361879, AI620610, AI906062, AW385408, AW373796, AW385411, AW385415, AW360894, AF112225, H75542, AW385929, N84722, T19738, AW193817, AW379467, AL135407, AA096480, AA911574, AA745725, AI245925, AA128676, AI087249, AI744235, AI752870, AF201337, X05276, Z98883, AC006316
1598	H2MBA27	876752	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 491 of SEQ ID NO:1598, b is an integer of 15 to 505, where both a and b	AI571948, AA308400, AA573793, AA314326, AA568312, AA614579, AI925552, AA307578, AA507595, AA614409, AA314825, AA578674, AA582084, AW009769, AA514776, AA588034, AW004668, AA587613, AA858276, AW050700, AI624586, R83818, AI001051, AI910275, AW050690, AA864309, R83377, AA524242, AA507418, AI202532, AI307407, R55389, AI970839, R55292, AI909751,

1599	HWLMB30	876753	<p>correspond to the positions of nucleotide residues shown in SEQ ID NO:1598, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 266 of SEQ ID NO:1599, b is an integer of 15 to 280, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1599, and where b is greater than or equal to a + 14.</p>	<p>AI910083, AI909772, AA614539, AI909749, AA506787, X00474, X52003, E02904, M12075, E03953, X05322, X05321, X05030</p> <p>AI307407, AI571948, AI909772, AI909751, AI909749, AW009769, AI970839, AW050690, AW050700, AA524242, AA587613, AA858276, AI202532, AA507595, AW004668, AA514776, AA578674, AA573793, AI925552, AA614409, AA614579, AA588034, AA308400, AA582084, AA307578, AI001051, AA568312, R83377, AI624586, AA314326, AA314825, AA507418, X00474, X05322, M12075, X52003, E02904</p>
1600	HHEBN60	876760	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1515 of SEQ ID NO:1600, b is an integer of 15 to 1529, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1600, and where b is greater than or equal to a + 14.</p>	<p>AI131324, AL037422, AL037391, AW161774, AI890947, AA122289, AA584305, AW273236, AI862040, AW085692, AI209167, AA148506, AI351762, N66647, AI523188, AW273178, AI830451, AA452008, AA705906, AL043832, AI571577, AI219060, AI361659, AA632645, AA662786, AW273354, AI885486, AA627153, AI050005, AA580620, W56473, AI266655, C75555, AA884431, W70047, W70048, N63491, N64411, AW055257, AI424319, AI554547, AI521110, AI559699, AI623228, N92821, AA160261, AA135865, AA171948, AI619980, AW088109, AA169427, AI434909, AW021267, AI539602, N94794, H03661, AA999936, C17025, AI055978, H03756, AI567074, AA151579, AI918516, AA207108, H88943, R70308, AI904987, AA345034, AI970814, H89175, R70632, AA135864, AA740380, AA156595, AA353886, R22230, AA618325, D56914, H44681, AI355451, AI955112, AI919589, C75412, AA577375, C75470, AI907423, T50659, AW263380, D56915, C02126, AI284452, R31847,</p>

1601	HOEMQ68	876762	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 3082 of SEQ ID NO:1601, b is an integer of 15 to 3096, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1601, and where b is greater than or equal to a + 14.</p>	<p>T40470, AI904794, AA384278, AI568036, T39196, C75672, T27972, D55752, R22288, AA862190, AI907464, AA149395, AA513034, R35775, AA484012, AA649723, AA160260, AA074934, AA262411, AA828667, AA501402, AW302880, AI076612, AA506004, AA975564, DI9957, L10911, L10910, AL034370</p> <p>AI810904, AA603949, AI680975, AI754691, AI126502, AI393833, AI770102, AW261877, AI335098, AI633698, AI093265, AI027769, AI885125, AI373081, AI580943, AI393771, AA749301, AW338708, AI250780, AA287845, AW453050, H71837, W03966, AA152044, AA603836, AA287846, AA042955, N99630, W02451, N25637, AI917997, AA244066, R63787, AA578977, AW239000, R78310, H54574, AA037115, N34235, AI240141, AW130305, H02870, AA042815, R73884, AA334992, AA114063, AA515422, AA368391, R62757, AA311857, R82819, AI128764, R63733, AA664138, AA953035, AA113801, R63857, AA298118, R23143, R62758, T69806, AA303428, R34175, R73971, H59544, R23144, T70792, R31823, R82820, AI9333547, AA244223, AI806610, AA742952, AI453225, AA327996, AW338192, R22283, R77939, AI240290, N72673, N95485, AA152084, AI383282, H60415, N98505, AW361055, R32084, R31777, R34297, R32031, AA374818, AA300327, AI076967, AA622059, R63858, N73903, AW150955, AI368478, AA037154, AW087179, AL080209, X67780, AF130561, M96248, M64474</p> <p>AA347863</p>
1602	HHFCP36	876764	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 322 of</p>	

1603	HTXKH86	876767	SEQ ID NO:1602, b is an integer of 15 to 336, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1602, and where b is greater than or equal to a + 14.  Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1021 of SEQ ID NO:1603, b is an integer of 15 to 1035, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1603, and where b is greater than or equal to a + 14.	AA314774, AI291017, AA191539, AI298290, AA147791, AW238920, AA308544, AA187762, AA081307, AA075926, AA773549, W52392, AA780574, AL038991, AA307244, AA181578, AA081167, C06415, AW402249, AA165319, AA132481, AW247110, AA076454, AA079384, AA304499, AA181561, AI857405, T35498, C06389, AA181655, AA314234, AA352654, Z45227, AA992505, AW000888, AI651014, AI392985, T34265, AI344273, AW341319, AA190808, R71708, AF104669, U87954, AR035973, U59435, X84789, U43918, U50137
1604	HISC172	876771	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2217 of SEQ ID NO:1604, b is an integer of 15 to 2231, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1604, and where b is greater than or equal to a + 14.	AI743600, AI885169, AI937505, AI042181, AA854952, AI522015, AA400219, AI522002, AA305093, N26064, AI888285, AA400130, AW296334, AW292016, AW440393, AI146794, AA187458, AI262079, AA855005, AI476446, AA187590, AI202446, AA860740, N50825, AI014949, AA041540, AA846133, AI335358, AA885027, AI038001, AW163208, AW070692, C06284, AA838476, Z43206, C05759, AA190468, AI680041, AA635314, AI034110, AA622708, AI000051, R64675, W44694, D60048, AA805958, F07813, Z40908, AA565995, F02659, AI471921, F05522, F05523, AI034108, R27644, AW236720, AA039917, AW163735, R64676, R27550, W38645, F01794, F01795, AW263460, D52614, AW151942, AA090824, C00912, X92396, AJ225782, X96737, AJ004799, AJ225808, X95807, AJ133541, AJ133539, AJ225807, X95806
1605	HJACJ75	876773	Preferably excluded from the	AA309052, AW247981, AA311506, T87086, AA352616,

1606	HTEDS8	876776	<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 665 of SEQ ID NO:1605, b is an integer of 15 to 679, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1605, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1663 of SEQ ID NO:1606, b is an integer of 15 to 1677, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1606, and where b is greater than or equal to a + 14.</p>	<p>AW339919, R01803, AW054854, H63371, AI097555, AI128037, AW392879, AW392871, AI197762, AW392909, H45736, U18300</p> <p>AA147098, AA506483, AA459122, AA553631, AA687219, AA639000, AA507321, AI475344, AW016032, AA902221, N47467, H15303, W69943, AA419435, W69833, AA680161, T27895, AI680311, H93979, C75158, H93980, R25544, AA223335, H15697, AI758259, AW079484, F02620, AI933243, AI680312, F02623, AI191766, R12384, AA371184, AA714796, AI383543, T69739, R09794, AI873805, AI581822, AI371311, R15273, AA093267, AA312224, S67325, X73424, AB000886, M14634, M13573, AJ006497, AJ006496, AJ006499, AJ006494, AJ006488, AJ006491, AJ006493, AJ006492, M31167, AJ006498, U86128, M31169, AJ006495, M31168, AJ006489, AJ006490</p>
1607	HUVHP60	876789	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1195 of SEQ ID NO:1607, b is an integer of 15 to 1209, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1607, and where b is greater</p>	<p>AA347492, AA307478, R18976, AA233030</p>

1608	HUFC129	876791	<p>than or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2594 of SEQ ID NO:1608, b is an integer of 15 to 2608, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1608, and where b is greater than or equal to <math>a + 14</math>.</p>	<p>AW007623, AI963511, AI587104, AI453405, AI694729, AI796832, AW363443, AW387811, AW387793, AI826957, AW361899, AI955696, AI955780, AI827005, AW387799, AI828295, AW192552, AA581220, AA527188, AW387817, AW363244, AI818260, AI956167, AI801443, AI904486, AI400372, AI921063, AW338519, AI693877, AI074261, AI927711, AI956102, AI920992, AI972695, AI911695, AI828218, AW076111, AI682785, AI921387, AW387812, AW337936, AW363218, AW364488, AI346975, AI913862, AW440967, AW130304, AW360772, AI696946, AI672948, C05920, AI587485, AW070932, AI635943, AI262029, AI739440, AA100719, AI955836, AI262264, AW376483, AW130542, AI972967, AW175800, AW387796, AA579753, AI446049, AI569938, AI934313, AI609930, AI677998, AI431963, AA553880, AI828330, AI597812, AA040073, AW360835, AA917638, AW377104, AI682718, AI354639, AW376508, AW192548, AI962102, AW376484, AW392307, U47705, AI813978, AW362727, AW361642, AA828073, AI261531, AI277071, AW136050, AW361304, AI934325, AA152037, AI695028, AI631388, AW377034, AA316326, AI470301, AI962061, AW377083, AW360762, AW362547, AI640638, AW391349, AW375920, AW376475, AW243579, AA130547, AW365061, AI961867, AA135037, AA581264, AI250167, AI453469, AI696953, AW376234, T29561, AI589481, AI582988, AW387713, AI537547, AW387715, AW376010, AI926514, AA132781, D45505, AA367446, AA838269, AA295348, AI828399, AI473526, AI587351, AA053595, T93569, AW376489, AW393447, AI584131, AA132182, AW360942, AI121028, AI569894, AI264699,</p>
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1609	HCRNO02	876795	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1999 of SEQ ID NO:1609, b is an integer of</p>	<p>AI264753, AW377162, AA132598, AA055605, U53097, AA587700, AW387798, AW387806, AI572732, AI955608, AW373707, AA834430, AW374782, AA584940, AI872586, AW176585, AW364936, AW373781, AW373783, AW373636, AI611749, AA053542, AW374712, AW198029, AW075785, AA132613, AW373627, AW338946, AW374717, AA366310, AA151939, AW364088, AW373705, AA366104, T29474, AI991653, AW364960, AW375981, U54607, AW373640, AW365022, AW373637, AW374744, AW373728, AW363272, AI572766, AA366576, AI904461, AW383505, AW383659, AA588827, AW362544, AW383654, AW373780, AW360980, AW376560, AW373706, M18728, E01972, I08158, M18216, M29541, A43167, E01971, M29540, M17303, AR044683, E03351, D90312, M69176, D12502, I08161, I08159, M72238, J03858, E03352, D90313, I08160, I08157, X16354, E03350, D90311, AR052807, AR052808, A39900, I08156, M15042, X16455, E01630, A43169, A43165, X52378, D90064, AC005204, AC004558, AC005392, AC005797, AC004785, AC004610, E03349, D90278, X16356, AF107735, AF006622, M17082, M16234, E03348, D90277, M22433, L00693, I08155, L00692, X16454, A37261, X62151, M16337, I08137, I08165, M76742, AF006623, U06673, M59260, M59256, M22434, M59257, M59258, U73590, U73589, T92142, AA040122, AA054073, AA054457, AA134992, AA939328, T10888, AI445504</p>
				<p>AW299764, AI686197, AI304852, AI744076, AA524023, AW418630, AI956147, AW149583, AI492144, AI763361, AI056100, AI264648, AW293714, AI955008, AI692564, AI911582, AW439524, AI261883, AI922688, AI623527, AI092437, AI871936, AI471612, AI092438, AA101743, AW272851, AI582628, AA016250,</p>

1610	HAUAF56	876798	<p>15 to 2013, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1609, and where b is greater than or equal to a + 14.</p>	<p>AI367070, AA976607, AA583461, AI249930, AW051844, AW205361, AA507715, AI954585, AA922244, AI273733, AA126244, AI087863, AI251918, AI334712, W67736, AI242730, AA101742, AW135527, AW402172, AA640129, AI347209, AI286337, AI581372, AI469691, AA069014, AA934842, AA508884, AI887809, AA831979, AI244186, N50480, AI275702, N50424, AA736752, C20724, N95586, AW304156, AA459318, AW192272, AI275964, AA947333, AA902224, AI220977, AA742300, AA321817, AA553858, R63954, AI933896, AI569580, AW084360, AI802071, AA888637, AI802496, AA364540, AA330481, AI623357, AA459100, AI879891, AA321816, AA806651, AW270487, AW117230, N73503, AI763427, AI570080, AA602961, T27344, W25008, AA306002, AW377570, AA016984, W67735, AA377036, AA092406, AA876851, R27168, AA069079, U18914, S82081, U35428, D82579</p>
			<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 590 of SEQ ID NO:1610, b is an integer of 15 to 604, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1610, and where b is greater than or equal to a + 14.</p>	<p>AA843663, AI636447, AI652163, AI741572, AI734839, AI191667, AI311840, AI092011, AA838667, AI651387, AW236921, AW241575, AA861653, AI800862, AA602368, AI689816, AW051840, AI354951, AA573089, AI148406, AI141828, AI183782, AI194006, AI693445, AI635512, AI493869, N90872, AW237388, AA126737, AA732844, AI192168, AI217045, AA137055, AA994789, AI493086, AA845631, AI094429, AL047557, AA181124, AI140430, AI860338, AA723326, AA506514, AI718897, AI142056, AA694462, AA527690, AA719919, W60495, AI128784, AA295736, AA719929, W74729, AA046090, AL079932, T27623, AI183793, AA777211, AA187497, W60781, W02217, AL047558, AI962738, W57590, W58378, AI040455, N78658, AA128249, AI092598, AI127083, AI767352, C00790, AI796294, F21069, AI962745, W58054, R82964, AI127007, AA319961, H25260.</p>



1611	HHEUM25	876802	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 965 of SEQ ID NO:1611, b is an integer of 15 to 979, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1611, and where b is greater than or equal to a + 14.</p>	<p>AA046133, F29476, AI024494, D57900, AA187496, R27633, F15904, N92901, F16228, AI880466, AA513941, AI028160, AA320194, AI942291, W15147, AA515161, AA319909, H27992, AA137126, AA032269, W17092, AA305767, AA317925, AA315585, AA316680, AA385920, AA082685, AA393514, AA319917, R82782, W21107, H58270, W60536, AW385090, AI857611, AA320009, AA125888, H48415, W74517, AI080481, H74142, W23645, F37285, AI831575, AW009545, AW405620, AI766029, AI208938, AI338767, H30492, AI907307, F00610, N86957, AI955298, AI904744, C02928, F31730, AA300671, AW375698, AA778636, AA314317, AW131256, AW173066, AI590946, AI880624, AI566275, N91884, AI610714, AA640156, AI573297, AI475815, H26962, AI9233989, N25033, AA804541, AI638798, J02874, A98023, M94856, AF181449, AF102872, AF136241, AP000547, AP000365, I88901, R82963</p>
1612	HWLQW0 8	876804	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 490 of</p>	<p>AI817822, AA148948, N50594, N25959, AA086480, AA148949, AW272750, AA374494, AW105366, AA160920, N50540, AA602221, AA160014, H53938, AI079093, AI015698, AI439431, T89890, AA086479, H83411, AB033097</p> <p>AW294678, N67220, AI538999, AW119213, AI367010, AI039731, N91158, AI357776, AW051603, AI435358, AI369016, AI091413, AI435427, AW296026, AI195056, AI765593, T16459, H99837, R55315, D29082, H88285, AI537645, R33635, D63011, AI553628, AI923565, AI270171, H49679, D61792,</p>

1613	HOEOP07	876807	SEQ ID NO:1612, b is an integer of 15 to 504, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1612, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1636 of SEQ ID NO:1613, b is an integer of 15 to 1650, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1613, and where b is greater than or equal to a + 14.	H52824, R55417  AI290876, AI765569, AI808777, AI338031, AA913566, AA573434, AI568487, AW175945, AI365073, AA845201, AA919010, AW418765, AA236333, AI127241, AI014784, AA687950, AA860243, AI393429, AA236239, AI266211, AA315078, AI802767, AA581469, AA620711, H45711, AI679135, AI572470, AA332122, AI024576, R70552, AA296901, AI809670, AW008766, AI915360, AI687397, AW023240, H45668, H04001, AA297249, AA621680, AW188056, D25944, AW196645, AA506116, H26091, AW193001, R70465, AI784132, AA382289, H03205, AI537449, D58213, AA298492, AA298805, D58295, AA904960, AA298494, AW020800, C03318, AA370634, AF105036, U20344, U70662, AF117109, AF022184, U70663, L26292, AB028623  AI346844, AW001371, AI991265, AI246778, AI749252, AI832475, AW000710, AI672920, AI991837, AI677743, AI281892, AW000809, AI991841, AI983400, AI673613, AW054915, AI991308, AA857748, AI672894, AI732375, AA534503, AI475425, AI673137, AI732350, AA523410, AI991039, AW001307, AA327452, T28149, AA327059, AI991842, AW374797, AI688199, AI475214, M94132, L21998, I95743
1614	HCQAE79	876809	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 973 of SEQ ID NO:1614, b is an integer of 15 to 987, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1614, and where b is greater than or equal to a + 14.	AI738919, AI923216, AW237190, AI769620, AW137673, AI905420, AI905431, AI148633, AW272315, AA587775, AI499299, AW072235, W60565,
1615	HCQDR53	876811	Preferably excluded from the present invention are one or more polynucleotides comprising a	

1616	HOEFO36	876816	<p>nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1473 of SEQ ID NO:1615, b is an integer of 15 to 1487, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1615, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 699 of SEQ ID NO:1616, b is an integer of 15 to 713, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1616, and where b is greater than or equal to a + 14.</p>	<p>AA774861, T85091, AA150805, AA666115, AA150811, T33125, AA173650, T84156, R49735, AA150702, Z43018, T35291, H82424, R72617, AI221587, Z38222, Z39956, AA150709, F03307, R48157, T35290, R40351, T35286, H71220, F03153, D61519, AI650460, H71219, AF034745, AF034746</p>
				<p>AI453687, AI571506, AI417180, AI453138, AA993886, AL048366, AI587024, AA769711, AA906543, AI333633, AI692876, AW007640, AI399951, AI983818, AI750469, AI4333964, AW130422, AI355200, AI567515, AW069544, AI367996, AW338539, AI925385, AI583403, AI014460, AI077522, AI435310, AI969659, AA149832, AI016334, AI016317, AI804042, AW068411, AA131691, AI339632, AI750268, AA476585, AI955590, AA962069, AI753179, AI247016, AI338848, AW073799, AI753153, AW068385, AI378389, AW073223, AI752287, AA600284, AI474336, AI359229, AA569973, AI342311, AI623621, AI753719, N23207, AI587013, AW068131, AA149811, AA723444, AA986275, N90797, AI888908, AI016443, AI961932, AI445548, AI783830, AA252895, AW382060, AA860598, AI417168, AI913843, AI624276, AW078934, AI635286, H88017, AW296238, H38240, AA131706, H88241, H88729, AI251004, AI351084, AA481319, AA194241, AI520853, AW068232, AI566383, AA853382, AA055161, AI610126, AW021156, AW021155, AI359367, AA586748, H78023, T79480, AA853653, AA779368, R40660, W86006, AW023185, AA055064, T94348, AI033179, AA677178, AA976366, R51036, AA156786, AA131536, C00154, AA131612, T28255, AI701212, R40533, C16582, C21348,</p>

1617	HFIAL22	876817	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 3508 of SEQ ID NO:1617, b is an integer of 15 to 3522, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1617, and where b is greater than or equal to a + 14.</p>	<p>D25653, H88728, L12350  AI346330, AA149866, AW190828, AA149859, AA625208, AA156875, AA569973, AW237648, AI610126, AI016317, AA315598, AA741426, N28788, AI247016, AI753179, AI160032, AA476585, AI033179, AI130835, AI342311, AI359229, AI016334, AI378389, AA600284, AW376487, AI753153, AI804042, AI474336, AI338848, AW068385, AA677178, AA435731, AI750719, AI752286, AW376482, N23207, AI075364, AI623621, AI359367, AI752287, AW068222, AI587013, AA962069, AA962775, AI750268, AA137125, AI246892, AI753719, AW073223, AA252872, AI417168, AI955590, W19516, AA397612, AA137054, AA316564, W94600, AI750531, AA723444, AI453687, AA860598, AW382060, AI752635, T79570, AI624276, W95178, AW067923, AW294003, T28255, AW296238, AI571506, R51145, H88729, AA331775, AA313295, AA481319, H78022, AA307252, AI351084, AA316570, AA625464, AW023185, N83257, AA448908, R14334, AI417180, AI520853, AI566383, AA055161, AA307888, AA639814, AA853383, AA993886, T79480, AA375731, AA853653, W86005, AW299293, H88728, AA327868, AA055064, AA906543, W86006, AW068232, AL048366, T94703, AI333633, AI587024, AW007640, AI750469, AI453138, AA193298, AA769711, AI983818, AI692876, AW130422, AA131536, C00154, AI355200, AA131612, AI367996, AW338539, AI925385, AA382961, AI399951, AI433964, AA344029, AW068411, AI014460, AI701212, AW069544, AI750269, AA374787, AA040676, AI583403, AI567515, W46226, AI969659, W46227, AI077522, AA149832, H38013, AW073799, AI435310, AA976366, C21348, AA149811, AA131691, D25653, N90797, AW068131, AI635286, AA252895, AI888908, AI783830, AI961932, N66997, AI016443, H88017,</p>
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1618	HWLMN8 5	876822	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 888 of SEQ ID NO:1618, b is an integer of 15 to 902, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1618, and where b is greater than or equal to a + 14.</p>	<p>AI913843, AI445548, L12350, M81339, X96540, L07803, M60853, M87276, M64866, X87620, M62462</p> <p>AI742117, AW051723, AA933088, AI246040, AI702461, AA612941, AA017379, AI362464, AA173916, AI474790, AI802234, AI863510, AA059061, AI284788, AA724009, L20826</p>
1619	HCGLC91	876823	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1144 of SEQ ID NO:1619, b is an integer of 15 to 1158, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1619, and where b is greater than or equal to a + 14.</p>	<p>AI140351, AI859347, AA530873, AA121548, AI815642, AA768342, AI864674, AA127712, AA722381, AA987515, AW275917, AA417302, AI354682, AI025466, AI859814, AA130959, N92869, AA100477, AW190165, AA768339, AI920875, AI051671, AW089493, AA417265, AA587755, AA045598, N21328, AA314322, AI371694, AA844332, AA043186, AI567303, R83064, AI350331, AW193146, AA580315, AI039892, AA828283, AI952434, AW377665, AI289086, AA100476, AI014387, AA917482, AA975893, N21020, AA621534, AA045597, H94056, AA306867, AW406948, AI564973, AI816957, AA729835, AI289415, AW103201, AI187288, AA661773, H80956, W04309, AW088039, AI018462, AA649285, AI083853, AI952495, AI419448, N47889, R89903, N27984, T40562, D82429, N80197, AA868207, AI955989, AI091426, AI873582, AW138496, H81296, AI288157, AI833059, T91268, R63140, AA130829, D12288, AA298770, AI699667, AI942324, AA310276, W22908, AA074395, D12293, T91580, AA342276, H81350, AA053266, AA353671, AI202414, AI832968, AA342277, AW084334, W25596,</p>

1620	HMHBJ66	876829	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2246 of SEQ ID NO:1620, b is an integer of 15 to 2260, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1620, and where b is greater than or equal to a + 14.</p>	AA297193, AW351513, AW377656, T98269, D12294, AI866230, AI908913, AI868829, R83013, AI220723, T85780, AA344066, AA382073, AI310801, AA807562, AI908912, W38488, T91628, AA193223, AI864799, C75247, AA370966, AI144388, AA334159, AW381854, AA311797, AW381856, N51146, AA100050, AA314221, AW380232, AA788629, N74141, AI802279, AI818065, AA894373, AW021281, AL122042, AC007842 AW392298, AW272601, AW014611, AI080627, AA430298, AW384668, AI797727, AI608964, AW272675, AW102844, AA176108, AW377459, AI131469, AI084855, H39807, AA625560, AI056544, AI753175, AI091091, N39574, AW071471, H49986, AA910009, AW439892, H17269, AI963968, AI038233, AI037961, AI038179, Z43393, W44646, H23373, AI656018, H01113, AI908070, AI908158, AI206196, AI831184, W28309, H17270, H23766, Z39465, H50029, AA307687, AW270187, H39808, T35734, N46719, AA031949, AA331031, T34994, AA320956, AA032033, H23262, N38880, H16357, AA355879, F02185, H23737, AA307468, W47462, AA127936, AI352060, F05939, F07123, AI342167, H16309, R27641, AA765464, AI342795, AA176107, AW238220, AI061303, W44647, AA746939, AA524800, AA856945, AA054355, H81732, AA664924, AI624800, AW265688, AA515440, AW023975, AA714524, AW166920, AA054055, AA290802, AI478965, N34258, AA564682, R20234, AW338370, AI049845, H01243, AI749527, AW338244, AA588353, AA745302, AI859744, AA362732, AA528566, AA523695, AF155120, AL034423, U39361, AP000505, AL021453, AC007036, Y14768, U63721, AC003982, AC007193, AC002511, AC004841, AC005632, AP000126, AP000204, Z85987, AC005920, AC005291, Y11107, AJ246003, AF001552, AC005318, Z81359, AL109613, AF111169, AL022322, AC005846, AL121655, AC004181, AL031662,
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	AL096701, AC004000, AF038458, U47924, AF001548, AF196969, AC005529, AL049747, AC005921, AL022316, Y18000, AC005348, AL009031, AC007842, AP000359, AC005874, AF134471, AC005091, AC002326, AC004216, U93305, AC004985, AC007845, AL118497, AC002351, AC006388, AC006064, Z83844, Z98949, AC004865, AL080243, AC005086, AL049795, AC005099, AF067844, AL035072, L78810, AC005231, AL121658, AL117337, AL049843, Z97053, AC002302, AC002377, AC005288, AC005822, AL031289, AC003102, AL021546, AF165926, AC005004, AC005081, AC004531, U52112, AL078602, AC006059, AC004814, AC003010, Z93020, AL022320, AL132642, M89651, AC002565, AL049869, AP000117, AC004812, AL049748, Z97054, AC006390, AC006197, AP000104, Z54246, AC016026, AC004081, Z82198, AC004816, AC002492, AC006241, AC007537, AC006023, AL035420, Z99128, AC004019, Z97989, AL031311, Z81357, AC004797, AC003029, AC008122, AC005841, AL133485, AP000688, AC005102, AP000692, AC000353, AL031291, AC002288, AC006071, AC004887, AC002357, AC006276, AC007040, AL031728, AC004837, AC004685, AC005753, Z82190, AL133448, AL023553, Z95114, AC006449, AC005516, U95742, AC002375, AC006160, AC011456, AC004876, AL023807, AP000513, AC004477, AF039907, AL049779, AC006480, AL031281, AL133355, AC007458, Z49258, AC003689, AL049694, AC005225, AC000026, AC004491, AC004770, Z98750, AC004587, AC004921, Z94721, AC010205, AF073485, AC004257, AL021707, AC005736, AC002364, AC004687, Z97630, AL080317, AC002465, AL035405, AC004858, AC003037, Z98036, AC000003, AC003108, AC005180, AC006117, AL133445, AC004021, AC004526, AC004890, AC005280, U80017, AC002551, AC006075, AP000014, AB023049, AC004882, AC005839,

1621	HCQDG08	876830	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1063 of SEQ ID NO:1621, b is an integer of 15 to 1077, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1621, and where b is greater than or equal to a + 14.</p>	<p>AC008040, U91323, AC003025, AC004851, AC005944, AL049569, AC005512, AC008033, AC004167, AL049709, AC005546, AC002073, U96629</p> <p>AI174828, AI300532, AW301004, AW247121, AW184021, AA702640, AI291396, AI245914, AI033187, AA9111317, AA017031, AA908694, AI017594, AA826532, AI002533, AI357704, AI033267, R83870, AI268718, R83871, H92338, H52695, T29050, AI651192, W26286, H92737, H68163, M76180, M88700, M74029, M84601, M84592, M84590, M84591, M84588</p>
1622	HE8BX38	876831	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2363 of SEQ ID NO:1622, b is an integer of 15 to 2377, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1622, and where b is greater than or equal to a + 14.</p>	<p>AI870000, AA150252, AI818389, AL037804, AW069455, AA452480, W30731, AI498817, W07047, AL036760, AA044764, AW022281, AI129268, W67847, AI032084, AI032081, AI150677, AW338118, AW067848, AW149812, AI336313, AA700790, AA826256, AA931652, AI139518, AI359798, W94966, WI7308, AA902723, AA662948, N21313, AA532767, N36278, W75997, AI970175, AI056480, AA741357, AI148372, AA044727, AA121421, AI089380, W17302, AI042150, N52985, N67294, W68682, AW449003, AI270317, AA121268, AW183001, W68776, AI419420, AI356058, AI349330, AI336371, AI359448, H99951, AI989381, AI131425, R80714, AI147483, AI311537, AA150261, N31548, AA885103, AI418180, AA709414, AI141649, AW338638, N55437, AA001935, N78914, N98212, AI052219, AI367635, AI862034, W76647, R79546, AA780884, AI187177, AI333805, AA045312, N24823, W74064, AI623918, N76810, W93372, AI033256, H50726, H15534, AI349421, H15591, D56381, W67788, W63753, N31248, W61122, AA045418, W69374, W69375, W70299, D56097,</p>



				R16959, R79547, Z26985, AA371284, AW075272, R82468, H03770, AA557276, T54892, AA193674, R71125, H67495, AI903697, AA054724, T88917, AA054671, T60999, AA328030, W73059, AI869152, AA299007, AA088621, AA099163, T28498, AI249109, T47984, N21531, N78876, AA343326, AW023118, R16904, R27685, AA370412, AI537432, R22973, N71889, R36621, N93462, H21723, T84233, AA688295, T47983, R71628, W21232, H02874, AA090586, R27587, R35753, AA383049, R23079, R38472, AI499335, AW369677, AI636170, AA303089, R80715, N88610, AA190565, AI498550, AW175704, R82469, R35646, R58194, AA204890, AA055544, N84016, AW379755, R36622, AA733037, N56466, T60941, R29162, AA218875, AW161156, AI621341, AI473208, AW051088, AI918809, AL135047, AI927233, AI590227, AW075382, AI540674, AI539260, AI475688, AI537677, AI698391, AI538885, AI691131, AI859991, AI128805, AW008779, AI950892, AI475371, AW410259, AI524179, AI521560, AI435253, AI814594, AW238688, AI499890, AI636507, AI797538, AI524654, AL047675, AI623941, AW105460, AI630932, AI866457, AI421523, AI560545, AI670895, AI225000, AI620864, AI648494, AI633125, AI499325, AA836168, AI538564, AL038445, AI915291, AW152182, AI582932, AI590043, AI872423, AI619820, AI434731, AI889189, AI479292, AI866469, AI500714, AI884318, AI452560, AI638644, AI570056, AI370623, AI799313, AW189716, AA641818, W74529, AI860027, AI701097, AI499570, AI633009, AI446538, AI590020, M30269, M27445, X84837, X84836, X84835, AL096744, I89947, AL049339, AR038854, AF087943, AL133624, M96857, Y13653, AR034821, A77033, A77035, AL136884, I48978,

AB028451, AF079763, A91160, AL117457, AL137480, A91162, AL049423, AL049347, X99226, AL023657, AL050277, AL110280, AL117587, X83544, A08913, Z13966, AF126488, AF185576, AL117435, A03736, Z97214, A08456, A31057, I33392, A08912, A08911, A41579, AF060555, A65340, X79812, AL137478, A76335, S76508, A57389, X70685, AL080110, AL117416, A08910, AC004200, A08907, A08909, AL133637, S36676, AL137530, AL137529, I32738, U35846, A18777, A21103, A08908, X66871, A65341, AL050116, AJ003118, AL050155, A58524, A58523, AR068751, Y10655, AL049283, AL035587, AL049447, AF013214, AL117463, AF031147, AF017790, AL110158, AF004713, S82852, AF151109, U42766, X53777, AF111112, A07588, AL080146, AL080159, AL137271, Z82022, M85164, AF183393, AF184965, AL137533, AF177401, AF061981, AF090901, AL050092, AL137267, AF125575, AR050959, AB016226, AL137557, AF065135, AL122104, I48979, AL117649, AL137574, AL122100, E07108, U62807, AR068466, AL137479, AL110218, AL137550, I89931, S77771, E01614, E13364, I89944, AC006288, I49625, AF026816, AF090934, AL050138, E12580, E12579, I09499, U58996, AL049276, AL137300, S83456, Y08864, X63162, E12806, U86379, AF026124, AL137711, AF044323, AL080126, AL133072, I18358, I34395, AF032666, AF057300, AF057299, I89934, AL031346, X61970, S71381, U75932, X97332, AF078844, AL137657, AL049324, X82434, AL110196, AL049430, AL110296, AF111849, U87620, Y14314, AL137722, AF116573, AJ005690, X72889, I77092, AL137537, E12747, A92311, AF082526, AF118094, U67958, I36502, AL137459, U55017, X67688, AL117460, AF047716, A58545, AF124728, AB026128, AL137476, A90832, AL133623, I79595, AF002985, AF100781, AL050172, AL110197,

1623	HMVCR68	876836	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1244 of SEQ ID NO:1623, b is an integer of 15 to 1258, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1623, and where b is greater than or equal to a + 14.</p>	<p>AF106697, U68387, X01775, AF139373, AL137665, X06146, X96540, S61953, A86558, A41575, X00474, AL133080, AF076633, AF159615, AF080622, U37359, AL050146, U73682, AR068753, AL122093, AL133112, AL133665, L04859, I29004, X66417, AL133559, AB019565, A12558, AF113019, AF100931, Y16645, U70981, Y11254, AL122050</p> <p>AI761567, AI149359, AI401619, AA740595, AA588565, AA424137, AI299200, AI143920, AA021117, AI913301, AW151208, AA425305, N47966, AI436446, AI685061, AF052498, AW081049, AW084051, AA451690, AW182326, AI332899, AA169542, AA169443, AA954593, AA042910, AA455865, AA149424, AI432492, AA460942, N47904, AA319689, AI377265, AA042923, AA461248, H20482, AI702363, AI371418, H85541, AW351484, AA151489, AI955508, AA385706, D79614, AA369939, AA834737, AW175964, H50494, AI291715, AI418716, AA861788, AW339974, AA369940, H87923, AA452637, AB033080, D42138, AF011794</p>
1624	HFCAl79	876837	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2455 of SEQ ID NO:1624, b is an integer of 15 to 2469, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1624, and where b is greater than or equal to a + 14.</p>	<p>AL048933, AI271440, AI092964, AI741387, AI760926, AI333315, AI680148, AA889492, AW190196, AW365955, AL048932, AI416991, AI923885, AI445890, AI138940, AI687147, AW365982, AI082757, AA280201, AI559407, AA553490, AW079043, AW001900, AW027109, N25109, AW355942, AI079486, AW451587, AI566301, AI623964, AI032887, AW365973, H22632, AI498456, AI270190, AW023890, AW137893, N40556, H47810, AI336798, H52365, AI933592, AA371581, H52364, AA904952, H22633, AA338820, AI537552, R16961, T82008, H96979, AI565231, AA377237, T81883, T71558, R16906, C01340, AI761493, AA280380, N46600, H48145, AW021702, AA887860, AA377236, T71263, H42623, T71208, AC004849</p>
1625	HBIOH43	876842	Preferably excluded from the	<p>AL049077, Z43264, AA362903, H44830, AA347303,</p>

			present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1267 of SEQ ID NO:1625, b is an integer of 15 to 1281, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1625, and where b is greater than or equal to a + 14.	W23148, AA369128, Z99916
1626	HOEMJ36	876856	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1341 of SEQ ID NO:1626, b is an integer of 15 to 1355, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1626, and where b is greater than or equal to a + 14.	AA910951, AA843679, AI348072, AI125272, AI042167, AA845606, AW129714, AI927609, AA868244, AI978910, AI525551, W06825, AA843914, AA779705, AW130928, W61040, W91932, AI831445, AW247636, AA186566, AI359205, AA523378, AI186133, AI160604, AI041480, AI198816, AI378985, AI207388, AA720662, AA181832, AA928300, AA890438, AI688759, AA393736, AA151916, W73728, AI184656, AI473972, AW272617, AA719242, AA890475, AA933747, AA534300, AA987916, AA622766, AI371055, AA878593, AI811357, AI829846, AI246201, AA987453, N21142, AA191541, AI345998, AI142485, AA307417, AA393794, AA102496, AA934733, AW082787, AW362863, W96444, AI343759, AW073775, N26594, AI624204, AI075412, W73785, AA706402, AI075444, AA312077, AW370975, AI304681, AA305477, AW370958, AI339961, AA988926, AI798191, H96572, AI631255, AA916632, N21361, AA393864, AI242708, AI186143, AI344381, AI002050, AA829718, AA666025, AI301839, N31157, T51961, W96541, AI186650, AA450264, N70868, AA189020, W35262, AI335966, AA868435, AI243742, AI718683, AI285022, AW380029, AI708661, W79062, W56704, AA450265, AI203443, AA313952, H05891, AA029676,

	AI924457, AI253584, AI750319, W74474, AW380015, AA541387, AI915283, AA953221, AI095790, AA687834, N63798, H72663, AA627355, N33299, W56739, N44829, H10500, AA223727, AW002227, AA961262, AW440854, N92556, C17191, AA223815, AA156119, AW263927, AW007959, AA035712, AI750318, H79841, H50961, AA703995, AA305808, AA024948, R91859, R96677, W56383, AA332390, AW440710, T28956, AA912076, N57269, N92539, W94895, R91038, H13004, AA082120, R92698, AA355945, AW337859, AA024991, AA3211569, AI932893, AA459672, AA459794, AA189019, T90302, N78866, H78774, AA361890, N49784, AA305857, AA361459, AA765973, AA361675, AA352730, AA771826, H72664, N94156, AI613134, N50485, AA628033, F02479, C17291, AA063528, R56364, AA459660, W39039, AA642158, H62620, AA352976, AA628038, AA729743, AA147291, T82974, AI749422, H96696, AA352839, N87245, W23447, AA627654, AA459783, R57554, AA729543, T52041, AA143387, N39666, W24824, AA742384, W17271, H62547, AA191268, N50430, AI468860, N54292, AW382069, N70049, H79840, W39006, T25454, H62619, N28023, AA353584, T63976, AI337484, AW059803, C20551, R85599, D25569, AA353199, H78693, AA091252, T63965, R91039, N49681, AL119863, AA024971, T64044, AW366372, AI925164, AI591101, AL043152, AL120254, AL042944, AI491904, M15796, X57799, AL034410, AR009805, Y00047, X53068, X57800, J05614, D17061, X67329, D28458, M29310, D17232, AR034530, AF113690, AJ005690, AL133640, E05822, AL110296, I48978, AL137530, A65336, I08319, AF069506, A21101, AF090900, AL137558, AL133619, AR034821, I89947, Y16645, A03736, AF028823, I09499, AL050393, AF118090, AF031147, AF177401, A86558, AF067728, A76335, I32738, AL122110,

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1627	HWWHPZ02	876858	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1174 of SEQ ID NO:1627, b is an integer of 15 to 1188, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1627, and where b is greater than or equal to a + 14.</p>	<p>S78214, D55641, M19658, Y10080, AL133637, AL049339, AF097996, AF038847, AF141289, AF118092, X52128, AL110221, AL050149, S83440, AL137660, Y07905, AB029065, U88966, S75997, AB016226, AF100931, AF113677, AL117463, AF001215, AL049314, 272491</p> <p>AW043824, AI094162, AI150332, AW152394, AI363370, AI340929, AW341579, AA904074, AI015843, AI039705, AI192155, AI338344, AI038188, AI144479, AA922221, AA804396, AA768639, H29728, AA256891, AA708611, H29729, AA902548, AA641864, AA256375, AA310759, AL038838, AL038983, AA641863, AL037727, AL038532, AI142134, AW316536, AA654177, AL038822, AL043814, AL043923, AL043845, AL040617, AL044186, AL041238, AL047012, AL041577, AL041459, AL044064, AL040294, AL041635, AL044037, AL047170, AL040463, AL040768, AL046850, AL045753, AL041752, AL045684, AL040625, AL047219, AL040052, AL043570, AL043848, AL041374, AL043627, AL041523, AL041730, AL044074, AL041602, AL043492, AL040839, AL043677, AL040472, AL043467, AL040510, AL042135, AL043538, AL047183, AL040464, AL045671, AL046442, AL040621, AL046994, AL040444, AL041133, AL039316, AL041324, AL046392, AL046914, AL040322, AL044258, AL044272, AL040119, AL041098, AL041096, AL045817, AL040148, AL045920, AL049018, AL047057, AL044199, AL044187, AL040458, AL041163, AL040576, AL041955, AL045990, AL041292, AL041358, AL040332, AL041142, AL041346, AL040529, AL041159, AL044274, AL037436, AL041168, AL040745, AL046330, AL041197, AL040128, AL040571, AL042096, AL047036, AL040342,</p>
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1628	HLTAZ90	876865	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1375 of SEQ ID NO:1628, b is an integer of 15 to 1389, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1628, and where b is greater than or equal to a + 14.</p>	<p>I66491, I66492, I66493, I66481, A83151, A93916, AR063812, AR028564, A24548, A24546, Y14219, A93931, I05845, X91337, AC005541, AA971815, AI032717</p> <p>AA873435, AA600839, AI768313, AI146480, AW058474, AA773760, AA902399, AI815095, W07335, AI936013, AI887319, AW247888, AI290267, AI949176, AI140850, AI383970, AA478888, AI335758, AA455467, AI131375, AA446062, AI375904, AW273478, AI569525, W92189, AI080606, AA446800, AI922678, W48604, AI669705, AI088017, AI079611, AI357729, W94886, AA778027, AI420677, AA662489, AA199802, AA199694, N99008, AA455466, W48605, AA737911, N22398, AI097343, R69048, AW079086, W81498, AA478769, AA602304, AA770587, AA568808, AI983493, AA903872, AI718164, AA577394, AA658448, AA579036, AA814776, AI687665, AI275990, AI127693, AI040179, H06586, AI188614, AI383744, AI160662, T16066, AW162694, AI209061, AI948507, AA432116, AA429907, AI571660, AA577605, AI926880, AI949479, AI991410, AW002319, W79730, AI675994, AI659734, N75810, AA999862, AA417649, AA582611, AI400342, AA749354, AA923020, AI537750, AI579976, AA953148, AI915035, N69819, AA256988, AA419605, AA133662, AI433790, AA193288, AA773001, W21280, AI470356, AI207126, AA470409, AA806422, T94567, AA074998, AI432068, AA725585, AA757124, N75636, T07950, AW265105, T07544, AI611358, AI954778, R50657, H06531, T27805, AI220764, W81497, H00562, AI120252, N80002, AA682966, AI440285, H12517, AA492209, AI784270, AA361222, AI915044, AI524835, T59434, AA035575, AA364008, D12231, AI702267, AA482915, AI420160, AA482927, AA501348, T94257, AA641987, AA369109, AA482933, AI932950, R29196, D12095, AA343259, AA588441,</p>
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1629	HHFUM32	876866	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 607 of SEQ ID NO:1629, b is an integer of 15 to 621, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1629, and where b is greater than or equal to a + 14.</p>	<p>T09050, AI239988, AI572155, T33940, AI917677, AA035065, AI915005, D57719, AA490946, AA635076, AA491134, AA659260, R15055, T59489, M78942, AW361295, AA534940, AW262956, AA629172, AA902888, AA736627, T09051, AA491132, AI557731, AC004081, AC007666, AC000052, AC004019, AF055664, L08069, DI3388, U53922, AA446079, AA429922</p> <p>AA525015, AI097213, AI186110, AI205864, AI460279, AA454512, AW003859, AI143331, AI305240, AI337532, AI279156, AI333362, AA770652, AA483013, AA846308, AI024319, AI380066, AI184498, AI204185, AI332737, AI025452, AA701068, AW298191, AA314391, AA780879, AI204046, AA722950, AA903838, AI368078, AI073640, AA010086, AA911716, AA948332, AI188877, N45102, AI094300, W52409, AI311092, AA622052, AI302571, AI369905, AI650241, AI138619, H48026, H41034, AI749308, N76689, AI354731, N31297, AI141562, AI347212, AI191310, AI092132, AA875920, AI346333, AI344362, AI186141, AI184174, N50933, AA854247, W32499, H93326, AA740175, AA765339, AA886065, AI718470, N54609, F32533, AA229525, AA604454, AA995306, R97891, AA854498, AA688403, H48027, AI312692, N46264, AI027037, AI192124, W77745, AA629102, AA975984, W05153, N45023, R68274, H57270, AI355659, AI192244, AA722963, N22908, AA046489, AA362565, W99330, AA075564, H18704, H18336, AA483751, AA024768, AI904485, R94597, AA887933, H41035, H23703, N84980, N69892, AA311757, H18805, F36632, R26083, AA046701, AI702033, H18369, AA327843, AA299086, F33066, R68309, W52410, AA877022, AA643367, AA079015, AA339134, AA641985, H26911, H57271, W99372, R96486, AA339947, W02163, AI220631, W05365,</p>
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1630	HHFAB62	876870			<p>AA772749, H93830, F26046, H58286, R94598, H28518, H23704, AA083351, AA075559, AA296237, N46263, AA352775, AA024767, F33965, AI557901, F24493, AA216428, F28514, AI750084, W72101, N98865, AI342158, R47744, AW265596, AA083549, R50391, AA083447, AA659764, AA302180, W31292, AA041272, C00512, AA709422, F18524, AL080089, D13118, X69907, X69904, X05218, D13123, L19737, M16453, T80797, T81201, H27411, R97890, N41011, N52542, N78879, N93425, N95193, W24594, AA079016, AA887623, AA216270</p> <p>AA346386, AW300186, AW364750, AW364745, AW374001, AW364749, AW373998, AL046035, AW373994, AW364756, AW373996, AW373989, D79991</p>
1631	HWLWJ70	876873		<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1144 of SEQ ID NO:1630, b is an integer of 15 to 1158, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1630, and where b is greater than or equal to a + 14.</p>	<p>AA527360, AW051577, AA757918, AI590246, AA482382, AA417897, AA834979, T33217, AI933007, AA886393, AI242582, AA912932, AA552566, AA026889, H12586, AA770351, AI122821, Z45211, AA810545, AA089741, AA026890, AW235276, AA442516, AI081311</p>
1632	HCRPV85	876876		<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 665 of SEQ ID NO:1631, b is an integer of 15 to 679, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1631, and where b is greater than or equal to a + 14.</p>	<p>AI138310, AA579608, AL080041, AA150112,</p>

		<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 4587 of SEQ ID NO:1632, b is an integer of 15 to 4601, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1632, and where b is greater than or equal to a + 14.</p>	<p>AI914754, AA310336, AW139942, AI669978, AA150453, N21199, AW337765, W60839, AA007492, AI245978, AW340469, H39087, AI857928, AW402945, AI857929, AA884547, AW044377, AA708593, H06461, AI554400, AA806848, AA292984, AA281307, D53188, AI074110, AI359733, H37969, AA911725, AA194095, AA757126, AA815284, AW166409, AI362093, AA258691, AW386068, AA614128, AI937918, AI218676, AA429422, AI361580, AA156587, AA931474, N27470, AA313613, N31349, AA936569, AA007448, W69685, D52529, AA171394, AW367949, AA150166, W47135, AA428365, D53165, AI253039, AA937690, AI752560, AA312520, AI039854, AI282901, AA884648, AI094728, AI201298, AI273365, AI346383, AI421258, AI310120, AI361451, AI285056, AA040411, AA789206, N88385, AI418521, AI973164, AA227133, N99005, AL038896, AW362878, AW403348, W24127, AL119637, AI016520, AA541481, AA309620, AA150397, AA306805, AI400189, AA284235, H51237, AA331743, AW023315, R67309, AA373361, AA156654, AA730527, D57421, AL045286, N92003, W69686, AA332449, AI368439, AA281258, AA040303, H63313, AA359717, AW362873, R74438, AA770542, H06565, AA363548, AI339537, AI023267, AA884006, D58110, AA922473, W60840, D58261, AI346133, AA722328, AW207758, AI753879, H06510, AA853720, AA332495, AA999738, AA331529, AW151651, D52528, AW391062, AA330258, Z45721, AA626164, AW390953, AA484242, AA382542, AW090257, D79754, AA227234, AA355615, D56466, AA313395, AA382088, AA169821, AI873035, R74343, AA354337, D53067, D53164, AW386086, AI749497, AW021983, H68127, AI149688, AA3655933, H11545, R26679, R36441, AA705035, AI799252, AW403752, T30044, T85823, AA359673, R57470, R25867, Z42383, D53068, N71806, D53095, C03662,</p>
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1633	HCE3V58	876878	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 362 of SEQ ID NO:1633, b is an integer of 15 to 376, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1633, and where b is greater than or equal to a + 14.</p>	<p>AA263144, AA111835, D81554, T83223, AA910604, AI056722, N21394, AA354104, AW270594, AI571557, N63858, AA503313, F23396, AI973191, AI590666, AA290658, R60888, AA382087, AA677495, AA290659, AL037148, X74262, X71810, U35141, AF097750, AE000658, U85195, AC005277, AA045875, AA398311, AA703653, AA853719</p> <p>AW301835, AI308020, AI860966, AA134268, AA878213, AA694197, AA088689, AA133904, AI285166, AA133903, AA302740, F26419, AA582580, F35821, H90906</p>
1634	HKGBE11	876882	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 3629 of SEQ ID NO:1634, b is an integer of 15 to 3643, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1634, and where b is greater than or equal to a + 14.</p>	<p>AI524051, AW007724, AI609303, AI560001, AI401617, AI936772, AI735659, AI249001, AW021551, AI247535, AA889466, AI770052, AA856594, AI923848, AI393945, AI963008, AW007900, AI802150, AW246695, AI589917, AI186661, AI680189, AW058621, AW081918, AW248728, AI160059, AA128006, AA812522, AI191795, AI128436, AI274108, AA909840, AA405642, H99041, AI015928, AA931655, AI262534, AW026999, AI423370, AA453200, AA131241, AA579953, AA702093, AI026873, AI161187, AA455704, AA455317, AI373875, AI359209, AW020484, AI204219, AI475739, AI125919, AI306480, AI123115, AI075685, AI183377, AI093279, AW137484, AA915929, AA745983, AW168028, AI191687, AI659743, AI346563, AI923367, AI472034, AI370998, AW169284,</p>

<p>AI690264, AI356799, AI298090, AA847328,  AI143203, AI573004, AA526151, AA701656,  AL036355, AA398429, AA781758, AI248617,  AA972778, AL120931, AA813433, AW364708,  AI625940, AA975860, AI051123, H18709, AI624093,  AW005429, N68529, AI299217, AI149399, AA988712,  AI355692, AA886616, N90938, AW373562, AA687849,  AI583218, AI566456, AI167133, H27061, AI355703,  AA757226, AA781558, AI086933, AI097546,  AI811692, AI375753, N91144, AI342620, AA126641,  AI421652, AW131426, W32307, N33217, AA888625,  W04345, AI348671, W17386, AA804381, AA305682,  AW016631, AA291227, W68759, AI004166, AA427526,  AA454983, AA479068, AI298478, AA732854,  AI080704, W68454, AI084772, AW084472, AA479223,  N27564, AI184963, AA505251, AI022978, D53877,  AA126497, D52932, AA828985, AW193312, AI073734,  AI245609, AA454161, AI589126, AI690281, N92279,  AA745905, AW057830, AA467899, AA938231,  AI187073, AA130568, AA610387, AA128029,  AA761970, AI890992, AA847408, N47754, N41931,  AI750050, AA456530, AA971614, AF139790,  AI435647, AA837736, AI017762, AA828994,  AA618297, AA614659, AA788753, AA601557,  AI682609, AA454984, AW168929, AA678000,  AA708844, AA151101, AW152083, AA143003, W42712,  N66889, AI298694, W17235, AI348194, H97544,  AA036731, AI902984, H18598, N89744, AI435894,  R69930, AA535636, D62527, AA514269, AI720059,  AI433476, AI248821, AI245176, AA403052,  AI263846, AA150090, W17187, W16652, AA962557,  AA031722, AA089961, AI287545, T75133, R75976,  AA968981, AI245198, AI814870, AA894619, D54851,  AA447055, AA701210, AA578436, AA150159,  AA467843, D53769, N22090, D52639, T28569,  AA889910, D56802, AI890986, C01613, H88627,</p>	
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1635	HRAEG13	876886	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 4037 of SEQ ID NO:1635, b is an integer of 15 to 4051, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1635, and where b is greater than or equal to a + 14.</p>	<p>AL079429, AL079428, AI962210, AW409971, AW409972, AW362305, AW410672, AI924517, AA406225, AW025356, AA405914, AI951876, AW410671, AI523918, AI890911, AI923197, AW206660, AI569743, N94878, N99556, AW301065, AA405354, AI936512, AW206646, AI872449, AW193338, N63552, AI207878, H29821, AA405693, AI184142, AI287700, AI039152, AA764984, AI347352, AW387060, AW386988, AW387093, AI081389, AA350220, AI148131, AA783037, AI243796, AI277386, AW387033, H69679, AA985309, AI635584, AI372628, AI372627, AA405353, AW408699, AA777168, AA350036, R56710, AW207334, N40073, AA781626, F11487, AA654125, R94204, R56864, R55500, T66335, H92624, AA350276, R81346, AI121276, AA350037, F09706, AI298408, AI873379, R51360, T87412, M78454, AI287710, F12065, H50110, AA351242, N22306, F09146,</p>



1636	HLIBZ07	876888	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1228 of SEQ ID NO:1636, b is an integer of 15 to 1242, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1636, and where b is greater than or equal to a + 14.</p>	AA234354, N26102, N55429, AL120770, AW387043, AA405389, H50154, H43762, AW387110, H72992, AA227365, R79738, R79737, H44600, H70095, R50621, AI184049, R45951, H29909, T66284, AA744978, N71548, H72991, AA368705, AA936885, AI739624, R55499, AW007986, T83200, AI863755, R50454, R50527, T36310, R50455, T85587, T77076, AA936368, H43432, AA464051, T87308, T07160, T78532, AA321966, AW268156, T85586, H43431, F26601, N40316, AI832126, AI372626, AW376436, N54476, R81601, R51465, R94300, AW367002, AA324819, N76802, AW073570, AI654772, AI473579, AA555237, AW102939, T77381, AA548001, AI985527, N76587, F35806, H92406, AW366992, AA302603, AW367067, AI937249, AW389336, AA862606, AB032950, AF128625, AF021936 AA946784, AW375919, AA527581, AA904758, AA209387, AA563949, AI833239, AA740268, AA527668, AW372169, AA948567, AA894539, AI745625, AA468774, AA725505, AW376020, AA164354, AA946619, AI348033, AA594622, AA453342, AW160477, AA937588, AA862503, AW375573, AI189061, AA988737, AW162844, AA588618, AW363501, AW375476, AA677897, AI310309, AI123763, H59915, AW161438, AW160982, AW160317, AI907434, AA780152, AW363508, AA526226, AW295010, AW176047, AI472327, T65562, AI005477, AA349978, AA928712, T08552, AA610643, AA307984, AA385290, AI905918, AA211030, AA349672, T65630, F12026, AA434132, AW365033, AA338674, AA453217, AA384272, AA339261, AA367135, T03912, R78158, AA367413, AA357314, H27129, R91610, AI766762, D51350, AA308647, D55070, AI214104, AW176070, R96738, AA343589, T03852, AA384370, AW264753, AW376759, AW376799, AA340742, AW363574, AW372990, AL048628,
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1637	HTPFB46	876890	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2110 of SEQ ID NO:1637, b is an integer of 15 to 2124, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1637, and where b is greater than or equal to a + 14.</p>	<p>AW376653, AA362098, D54438, AI905702, AA300134, AA747175, F09672, AA384504, AA233381, AI870184, T79091, AA367166, T84398, AA451673, H25082, R45919, S75311, AR037563, L33930, D87667, X69397, Y14692</p> <p>AI718712, AW444886, AI983059, AL135147, AI085966, W07327, AI492267, AI360984, AA564235, AA573268, AA406085, AI678761, AA577144, AI091819, AA297803, AI289839, AA037033, AA804950, AA533437, AI242554, AI223449, AA410390, AA644395, AI216720, AW005660, R77919, AA878891, AI468125, N51728, R32385, N25411, AA256925, AI811527, AI142611, AA954723, AA256501, AA317506, W52143, AA421853, AI623878, AA932178, R78020, AI089059, R32384, AI242914, T81104, F34121, AI468126, F25882, N75820, AI335792, F35752, F18999, AI984724, AW305237, AI345730, AW268284, AW166690, AI349242, AW086410, AW272065, AI310836, AI345115, AI223675, AI308339, AI312490, AI252159, AI345249, AI307405, AI580578, AI252423, AI252373, AI349681, AI252335, AI250483, AI252345, AI583501, AI583500, AW302935, AI583889, AW303168, AI348995, AI349742, AI309420, AW269095, AI336494, AI335439, AI349287, AI306795, AW274358, AI349945, AI252286, A58884, L40823, U06846, AR051950, L40817, L44140, X87196, X74606, X90393</p>
1638	HDPSS23	876892	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1421 of SEQ ID NO:1638, b is an integer of 15 to 1435, where both a and b</p>	<p>AI129800, AW027959, AI927949, H92980, AI650270, AI708393, AL138076, AA524072, AI831594, AA749139, AI926721, AI399955, AI302816, AA262795, AI862160, AI093249, AA828301, AI625105, AA904444, AA772552, AI816834, AI084565, AA314418, N30447, AI242763, AI810709, AI653617, AI129801, AA443839, AI289975, AA281653, N25206, AI758575, AA026905, AA737455,</p>

		correspond to the positions of nucleotide residues shown in SEQ ID NO:1638, and where b is greater than or equal to a + 14.	AI474418, AI619613, AA039864, AW000990, AA039860, AA291708, H86861, AI032004, AA452814, AW084297, R97735, AI640264, AA336497, AW080103, AA026904, AI052445, H73499, N54837, R92739, H73311, AA040230, AI311105, C21440, AA338774, H94209, N69415, N91446, R76435, AW029069, R96804, AA281785, AA680378, T18545, AA338773, T10789, AA610255, AA568204, AA570740, AA483606, T47138, AW151018, AI355246, AI445373, AI915081, AA219349, AA664126, AA582746, AW275432, AA558404, AA837771, AA214453, AA857812, T94394, AA482792, AI249688, AI567391, AA630854, AA683069, R67701, AA515939, AA425924, R77139, AW069227, AA714073, AA297006, AI285493, AI298079, R79929, F35097, AI634377, AI791659, AW104163, AI671077, AL048060, AA809186, AA831408, F35684, AW084967, AA523695, AI962030, AA846923, AA533040, F24745, AI889579, AA102737, AI185394, AA491767, N51636, AI538236, AA558366, AI880761, AI735092, AA376358, AW272815, F23338, F31066, F37059, AA612578, AA668587, R79255, AA196552, R93919, AW075729, AI433131, T71936, AW419389, AA632556, AI634187, AA302978, AI457313, AI620992, AI358542, AA769141, AA342238, AA583386, AI312090, AI049630, U91323, AC004686, AL080245, AL035587, AC002073, Z81357, AC007993, AP000113, AP000045, AL049748, AC010582, AC005778, AC004797, AL021939, AC005702, Z82901, AC007774, AP000030, AL008718, AP000250, AC004232, AC004079, AC006344, AC005759, AC002365, AC007193, Y07848, AC004598, AL096701, AC002565, AC005799, Z73900, AC007390, AL031721, Z93016, AL118497, AC006501, AC007566, AC005740, AF067844, AC005011, AC006077, AC000064, AP000133, AP000211, AC004859, AC006333, AC007179, AC000025, AL049776,
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	AC005527, AC003688, AP000346, AC005412, AL050318, AC005225, Z84488, AL020995, AL031186, AC002381, AC005057, AC005231, AF045555, AP000300, D88270, AC004485, AC005207, U91326, AC007917, AC000003, AC002544, AC004816, U03115, AC004253, AL035249, AL078593, AL049869, I34294, AC006530, AC005668, AF128525, AC005695, AC005529, AL034417, AC005291, AL031005, AC005184, AC005072, AL023879, AP000689, AC005519, AC004551, Z83838, AL031295, AC003029, AL035458, AC003690, AC003957, AF030876, AC004655, AC007425, AC004964, AL022721, AL096791, AP000547, AL022318, AP000255, Z82976, AL049576, AF196972, AC005924, Z99716, AC002395, AC004383, AC004881, AC002288, AC004522, AC004828, AF031078, AP001039, AL031311, AC005015, AL023807, AL049553, U62293, AP000502, AC005081, AC007055, AC007537, AC007738, AC002350, AC002504, AL135879, AL121790, AF207550, AC004386, AC000353, AL031230, AC005071, AC002115, AC005756, AC002072, AL023575, U66060, AP000213, AP000345, AC007227, AC007075, AL031587, AF184110, AC005409, AL133448, AL080243, U91319, AC006960, AL034420, AP000135, AL121652, AC005480, AC006571, AC006312, AC000035, AC007565, AC005726, AC004745, AC004865, AC002551, AC005180, AL031685, AL021920, AL024498, AC004129, AC007563, AP000031, Y10196, AC005609, AC002418, AC007637, U51244, AC004815, AF001548, AC005696, AL135744, Z83847, Z68324, AC004878, AL049729, AL034400, AC005632, AC008012, AC004491, AC008372, AL031297, AC004777, AL031293, AC002984, AL133163, Z97183, AC003692, AC007057, AL024474, AC006961, AL135959, AL035455, AC000111, AC004896, AC008975, Z97056, L44140,

1639	HCEIC29	876901	<p>AL078644, Z94802, AF064861, AC006121, Z98051, AL049610, AF102137, AL008582, AP000555, AC009247, AL049843, AC007899, AC004974, AC007172, AC006120, AC008149, AC004780, AP000355, AL049643, U78027, AC006276, AL035450, AC005089, Z93784, AC005399, AC006430, AC007114, AC002550, AC004587, AL022316, AA261881</p> <p>AA099268, AI676066, AA872993, AI916603, AI686512, AI862396, AW134699, AI768494, AI656235, AI760422, AW340874, AI760767, AA456537, AI950211, AI365227, AA455250, AW019939, AI560709, AI521183, AW269381, AI343443, AW242591, AI862402, AW182833, AA906566, AI825167, AA910881, AI355516, T62487, T62632, H22865, AI470602, H24258, AI910667, T10397, AA319888, AA084251, AA465631, AA084250, T48979, R22512, R22511, R62215, R70206, R74308, H02508, R85869, R92578, R94703, R94783, R99284, H53551, H53550, H57860, H66191, H66190, H68304, H68303, H68633, H68632, H73905, H74097, N29973, N58152, N59546, N78287, N93155, W03816, W39117, W39754, W45221, W72425, W76578, N90187, AA010750, AA011178, AA035374, AA035090, AA044020, AA044195, AA099403, AA099464, AA131818, AA132001, AA181697, AA255734, AA279493, AA459458, AA465677, AA513468, AA610670, AA661647, AA807978, AA931089, AA932324, AA938458, AA947789, AA216163, AA477227, AA477226, AA709315, AA716569, AA774617, AI024245, AI024575, D25921, T16050, Z42876, F02340, AA699770, AI264621, AI268001, AI270489, AI432949, AI419091, AI475199, AI129103, AI139707, AI200420, AI205134</p>
1640	HE90Y91	876903	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1617 of SEQ ID NO:1639, b is an integer of 15 to 1631, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1639, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a</p>

1641	HFKFN66	876904	nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 839 of SEQ ID NO:1640, b is an integer of 15 to 853, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1640, and where b is greater than or equal to a + 14.	AL031433	
1642	HWMFQ16	876905	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 674 of SEQ ID NO:1641, b is an integer of 15 to 688, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1641, and where b is greater than or equal to a + 14.		AA775776, AI041206, AI884423, AA608631, AA307942, AA602534, AA477709, AA604331, AA610041, AA237053, AI874354, AI922651, AA455372, AA478920, AI861817, AI174744, AA639758, AI803985, AA307739, AI217011, AA242978, AI420956, AI082010, AA290814, N35525, AA397578, W04164, AI740453, H18746, AA457124, AI369854, AW402584, AA250883, AI362747, AW401485, N63084, AI826090, AA969826, AA418085, AI301135, N42604, N32932, AA464471, N44904, AI206819, AA206545, AI264316, AA205363, AA627399, AA908393, AA206909, AA399551, AA386030, AA205036, W07733, AA151195, AA292402, AA723847, AA151196, R68884, AI217962, N62289, R60986, AA019523, AI307617, AA535112, H18659,

1643	HCRBB01	876909	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1330 of SEQ ID NO:1643, b is an integer of 15 to 1344, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1643, and where b is greater than or equal to a + 14.</p>	AA782617, AW401677, AI9233522, AA148955, AA136448, R61653, AA369942, H45205, AI311834, AW383689, N70126, H78459, AW169009, N77580, AI695617, AW383687, AA383122, T96825, AW383681, AA477710, AW188902, AA148954, AW383686, T36291, AI826948, AI755216, AA628518, AI249697, AA236854, AI064883, AA977383, T35725, AA761981, AA478800, AA588591, AW275155, AA206781, AA610557, AA765404, AA299218, AI274603, AA484614, AA252156, AA394239, N89897, AA418016, AI289322, N35239, T96813, T98004, Z39105, AI347692, AA401922, R68786, AI421701, AA300711, AI984054, AI307367, AI869880, AW003896, AI357580, AI097540, H78257, AA773528, AI933853, N26474, W19451, T96826, AA937255, AA494127, AA456012, AA622190, AA531018, AW264334, AA296375, AW340846, R39778, AW368305, T98082, AW406763, AW389979, T32639, AW389990, AA773673, AA304962, AA233500, AW383537, R58298, C15957, N78713, AA019294, D78788, AW389995, AA402093, D31588, AW366573, AA095078, N87188, N86592, N88113, N88337, N85682, AF078859, AF078868, AL021878, AF090946, U21721, AJ243486 AI345975, AI041822, AI354345, AA845341, AI471536, AA582006, AI264230, AI133028, AI922898, AI826795, AW272874, AI889042, AI749224, AA307941, AW275172, AI926872, AA482539, AI680141, AI734884, AA524591, AW274596, AI336326, AW169351, AI885643, AW269482, AI749219, AI026046, AI143001, AI689406, AI591185, AW361012, AA602933, AI922602, W60954, AI735165, AW377897, AI566471, AI275792, AI814420, AA948377, AI683757, AA862488, AI139188, AI288260, AI277724, AI653978, AI890155, AI934802, AI911644, AI890535, AA228045, AW148951, AI889786,
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AI804207, AI274877, AI654469, AA987320,  
AW243847, AA555069, AA860461, AI689372,  
AA741520, AI937827, AI003581, AI831369,  
AI281145, AI871203, AI281294, AA855149,  
AI168130, AW377974, AI084421, AI092091,  
AI833225, AA505597, AI336527, AA554687,  
AI167764, AW088401, AW104699, AI150063,  
AL047161, AI798382, AW083700, AI038771,  
AW020827, AA928652, AI031884, AA826396,  
AA492267, AI625287, AI022580, AW270586,  
AI183695, AI026083, AA508597, AI080205,  
AI262884, AI073697, AI354660, AA226127, W78208,  
AA640721, AW149240, AA228005, AA759055,  
AA992173, AW150128, AA908342, AA554425,  
AI276333, W74125, AA034485, AA635275, AA639307,  
AA412053, AA742571, AA303334, AW166455,  
AA903876, AA173331, AA640905, AI963101,  
AA602023, AA378134, AW079690, AI934122,  
AA527819, AW368030, AW081647, AA531295,  
AA922080, AI050907, AI873602, AA173437,  
AI273804, AI589932, AI918522, AA916057,  
AA826837, AA235239, AW089108, AI922253,  
AI873976, AI885463, AA216394, AA508227,  
AA890672, AI572298, AA382418, AA341151,  
AW105574, AI281853, AI886217, AI535908,  
AA337736, AA837555, AI933527, AA299593,  
AA301629, AA654205, AI633050, AI553701,  
AA218783, AA426414, AA366375, AA173738,  
AI572371, T83429, AA215892, AA385436, W20026,  
AI684322, AW367106, AW377982, AA146684, T05849,  
AA828869, N90536, W32260, N93484, AA173705,  
AI092389, AA650299, D56517, T27681, AA552197,  
AA225725, AA235238, AI952204, AI720878,  
AW176624, AW367125, AA146683, AI161032,  
AA226022, H88875, H88876, AA523823, AA302252,  
AA301829, W21502, W70311, AA311804, AA729966,



1644	HSAAN15	876912	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1095 of SEQ ID NO:1644, b is an integer of 15 to 1109, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1644, and where b is greater than or equal to a + 14.</p>	<p>AI273789, AA096200, AW377515, AA729962, D20952, AI811103, T84076, X60111, AR016441, I13744, M38690, D10726, AC006057, L35275, M81720, L08115, D30786, AR016440, E05732, X76489, L08125, L08118, U15792, S60490, L08119, L08120, L08122, L08123, L08124, L08121, S60489, S60462</p> <p>AW295760, AA643028, AI858075, W22593, AI682269, AI819607, AA910344, AA573333, AW406408, AI741854, AI088151, AA481497, AW021995, AA687410, AA826812, H63145, H08408, W07228, AA765739, AA521057, R53520, AA362594, AI584029, AA689386, AA732248, AA970100, AI004471, R44238, AI811208, R53519, AA373512, R49374, H17459, R44200, AA481183, AW207413, AI075435, N66439, AB029003</p>
1645	HTEKS27	876913	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2159 of SEQ ID NO:1645, b is an integer of 15 to 2173, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1645, and where b is greater than or equal to a + 14.</p>	<p>AA758002, AI657156, AI375103, AW021134, AW150836, AI684065, AA678409, AI694321, R17458, N62359, AI655208, AI702778, AI701838, AW043913, AA782285, R54239, AA436083, R59807, AI205974, N79126, AA112078, R35463, L13827, L13824, L13825, R59697, R51845, AI479241, R39382, AA083911, AI635429, L13826, R38307, AW393336, R13143, A61243, L23208, AR051320, AR051322, L30110, L23311, AR051321, L30109, A61247</p>
1646	HWMBAI 0	876920	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1380 of</p>	<p>AI749171, AI660550, AA677676, AA464420, AA284905, AA718994, AI141193, AA481894, AI078424, AA481977, AA703408, AI276556, AI017050, AA502348, AA936362, AA936704, AW131471, F36806, AW273475, AI261777, AI218960, AI218966, AI744229, AI248232, AA452839,</p>

1647	HCQB038	876921	SEQ ID NO:1646, b is an integer of 15 to 1394, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1646, and where b is greater than or equal to a + 14.	AI277984, AA053718, AI150864, AI140517, AI129769, AI160406, AW152129, AW000750, AI248566, AI805790, AI826304, AI086599, AA020812, AA018986, AA054250, AA019875, AW242786, AI903707, F22534, AI240050, T41072, W96529, AW069782, W68326, AA053858, H37782, AA055112, H83990, AI765563, F31495, AA020811, AI244397, H37923, AA013192, T51835, R50369, AW339481, AI903705, AW194148, AA019902, W68142, AW298469, AW003689, AI860462, AA019913, AW139654, AA383551, AA384419, AA883222, H41086, AI420423, AA021054, H86062, AI735754, R80952, W92479, AA535061, F31376, T40204, C04332, AA019941, AA464476, AW050973, AI560455, AI470969, T51881, AI695746, AA284774, AA855078, AA013427, H38276, W92489, AA412431, AA844626, AW074589, AA919166, H86397, AA906632, F36956, AA018714, AA021006, AA457128, W68469, H83989, AA015696, AW050422, AA402869, AA015660, AA464421, AA454730, AA015659, AA454780, T28267, AA018985, AA018750, AC006449 AI803478, AA578800, AI760557, AA569728, AI803206, AI199737, AI524625, AA825640, AA937979, AI436327, H83996, AA879427, AW205011, AI284171, AA262130
1648	HWLGQ64	876923	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 711 of SEQ ID NO:1647, b is an integer of 15 to 725, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1647, and where b is greater than or equal to a + 14.	AI743526, AA535976, AA534299, AI245191, AA917952, AI360198, AA189088, AI476640, AI750101, AI151214, AI219288, AI189990,

1649	HCQCV14	876926	<p>nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1579 of SEQ ID NO:1648, b is an integer of 15 to 1593, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1648, and where b is greater than or equal to a + 14.</p>	<p>AI127112, AI582665, AI050781, R80366, AA706856, AI581641, AA693998, H01950, AW016083, AW292149, AA915966, AI219588, R07874, R68737, AA531303, AI192934, AI149588, H02159, R78817, T52702, R73741, H45133, R69845, AI832515, R21520, R78816, T46918, R68019, AW025113, R68683, H45436, R80252, R35081, R69003, T52701, AA724770, R80206, AI521622, AW272700, R12585, R80309, R79313, H04450, R78008, AI222696, R79314, R69002, R07933, R69844, R21622, R23749, AA873780, W95082, R35080, T46932, R70944, AW029093, R68018, AI619788, AI582092, T49292, R09945, T46933, AI337719, AA233721, R23802, AA378781, AA917397, AA923057, T49293, AW361573, AI241836, AI261408, U26726, U14631, AF126744, AF126745, U23835, U14128, AF074706, U22424, U27318, S83516, S80133, U27317, S83532 AP000529, AP000528</p>
1650	HCR0059	876934	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 558 of SEQ ID NO:1649, b is an integer of 15 to 572, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1649, and where b is greater than or equal to a + 14.</p>	<p>AA376902</p>

1651	HCRPN27	876936	15 to 405, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1650, and where b is greater than or equal to a + 14.  Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 981 of SEQ ID NO:1651, b is an integer of 15 to 995, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1651, and where b is greater than or equal to a + 14.	AA457220, AA354909, AA040828, AI688798
1652	HCRON34	876938	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 622 of SEQ ID NO:1652, b is an integer of 15 to 636, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1652, and where b is greater than or equal to a + 14.	AI634562, AA129701, AA129323, AA129745, AI269483, AI952719, AI656261, AI239764, AI678885, AI873730, N48153, AA904475, AA653518, AI538894, R43961, AI287295, W68609, AI114476, AA973355, AI866872, AA133249, AI681503, AA133292, AI690203, AW271391, D29021, AI186074, AA757303, AA742226, AA737777, D29578, AI825401, AI934240, AA587412, AW051055, AW020046, W68807, D83781
1653	HFKFH50	876940	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1241 of SEQ ID NO:1653, b is an integer of	AA927698, AI300925, AW009795, AA402380, AI830852, AA430318, AI493302, AI142868, AI037989, AI423267, W52884, AA907276, AI333045, AA628712, AA988209, AI363130, AA987992, AA578507, AI298580, AA639466, AA402235, AI052201, AI073629, AA458463, AA564499, N78968, AA534799, AW083734, AA442975, AI074925,

1654	HCRQG66	876941	<p>15 to 1255, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1653, and where b is greater than or equal to a + 14.</p>	AA400276, AA053124, C04884, AA775515, W60092, AA425157, R83528, AA401316, AA676435, D51268, AA359764, H27189, C01185, AA402234, H27190, R37964, W39595, T27801, D55114, R45640, AA146682, AA485712, AI971664, D52799, AA347823, AA485845, AI079236, AW445076, AW444515, AA031677, AA031678, W17355, AA146681, AI739376, AA053511, AA343828, AA035266, AI648529, AI867052, AC004634, AR042382, L17032, L36027, L05489, M93012, X89728, Y15731, AR042385, X67295, L17029, L17030 AW392670, AA581171, Z99396, U46347, AW384394, AW363220, AL119484, AL043003, AL119443, AL119497, AL119444, AW372827, AL119457, AL119319, AL119324, AL119439, AL119483, AL119391, AL119522, U46351, AL119363, AL119355, AL119335, AL119418, U46341, AL036418, AL038837, AL119396, AL119341, U46350, AL134132, U46349, AL037051, AL043147, AL036725, AA631969, AL119496, AL134530, AL134519, AL037205, AL036858, AL036924, AL134531, AL119401, AL134527, AL134528, U46346, AL039074, AL042614, AL134533, AL119399, AL042984, AL042965, AL042975, AL042542, AL042551, AL134538, U46345, AL042544, AL042989, AL043019, AL134542, AL037094, AL038509, AL043029, AL036196, AL042450, AL037085, AL037082, AL037077, AL037526, AL036767, AL037639, AL036190, AL119464, AL038520, AL036268, AL036998, AL036733, AL037027, AL037615, AL036191, AR066494, AR060234, A81671, AR023813, AR064707, AB026436, AR054110, AR069079 AA330056, AA236014, Z98049, AF149770, AC004801
1655	HCROW80	876942	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 504 of SEQ ID NO:1654, b is an integer of 15 to 518, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1654, and where b is greater than or equal to a + 14.</p>	

1656	HLQER45	876943	<p>the general formula of a-b, where a is any integer between 1 to 779 of SEQ ID NO:1655, b is an integer of 15 to 793, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1655, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1048 of SEQ ID NO:1656, b is an integer of 15 to 1062, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1656, and where b is greater than or equal to a + 14.</p>	<p>AI626059, AI626106, AA826765, AI040137, AA643166, AA700884, AA548726, AW361733, AI424257, AI860448, AA580441, AI985034, AI720331, AI720332, AI459935, AW383179, AA308449, AW383230, AW383291, AI304515, AW383110, AW383173, AI084026, AI801735, AA135152, AA588817, AA588576, AW383112, AW383292, AI829153, AW383143, AW016001, AI802779, AW361734, AA129139, AW383175, AI475415, AA834407, AI247812, AI282992, AW376286, AW392915, AA502781, AA053766, AA973594, AW238610, AI860189, AW084925, AA344804, AW363161, AA129138, AW004060, AW363048, AA053663, AI638684, AW024090, AI694258, AA159581, AA345424, AW363163, T72477, AA933684, AA553869, T72849, AA513679, AW352403, AW365132, AW379947, AW363141, AA135289, T70578, AW363162, AW084865, AI680270, X53463, X68314, X91863, X91864, E02175, U62658, D16913, AF099176, AL080126, L24896, AL137292, M30514, AF161699, Y10823, L13297, AL110224, A07588, AR068751, AL117416, AR038969, I17767, X54971, E02914, Y10655, AF061795, AF151685, AL050092, AL137665, AL110280, S63521, AL137548, I89947, I48978, A08913, U57352, I89931, AL080127, S77771, A08912, A08910, A08911, I49625, A08909, AF090943, AF026030, I03321, A03736, AR038854, A18777, A08907, A08908, AL137461, AF017152.</p>
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			A07647, U62966, S76508, I89934, U00763, I09360, A90832, AF016271, AL137267, AL050280, AF159148, AF061943, AF008439, I18355, I34392, AL080162, AL137550, AB007812, AJ001838, AF117959, X76228, AF118064, AL050024, X70685, AF118090, AF141289, AL117583, U87620, U49434, AL137658, AL133568, AL117435, AL049464, AF017437, AR054987, E08631, AL049452, X63410, S75997, S36676, U53505, I52013, AF120268, E15324, AL137558, L31396, U68387, AL137656, AF004162, U80742, L31397, I00734, AF113694, AL133558, AF069506, Y09972, E00617, E00717, E00778, X96540, I29004, X66417, I89944, A70386, U75932, AL133054, A47363, AL050146, AJ012582, AL137521, AF114168, AF145233, AL049339, AL049300, AF113676, AL136842, A08916, AF026816, AF028823, AR034830, I96214, AF036941, AF055917, AF115392, U57715, AJ238278, AF026124, AF158248, AL133637, AF175903, AL133098, AL133557, AL122093, X62773, AF031147, AL049465, AL137276, X97332, AL110171, A92311, AF113019, AL137283, U55017, U92068, AF051325, AF176651, AJ242859, X67688, AL080158, AF205861, AL110225, Y14634, AL117394, A52563, AF106934, AF119358, U91329, AF057300, AF057299, AF115410, AL035458, AL110159, AR020905, AF113690, AF100931, Y10080, AF022813, AL137298, X60786, Y11254, AL049314, E12580, X52128, U86379, AF126488, E01314, Z37987, AL117457, AL050116, AL133016, X99717, AF199027, AF106657, E01614, E13364, AJ012755, M92439, U51587, U01145, AF091084, AL050277, AB026995, AF118070, E12579, X06146, E15582, U77351, S82852, AL137554, AL117585, AL122098, AF000301, AL133062, AL080140, AA523439, AI652347, H72650, AA486265, R36338
1657	HWADQ26	876944	Preferably excluded from the present invention are one or more

1658	HLJB174	876945	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 598 of SEQ ID NO:1657, b is an integer of 15 to 612, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1657, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 507 of SEQ ID NO:1658, b is an integer of 15 to 521, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1658, and where b is greater than or equal to a + 14.</p>	<p>AI089472, AI201678, AA121121, AI225034, AA040061, AA026978, AW074127, AA588232, R75602, AI381304, AW316739, H96548, AA503627, AI049774, AI560029, AA860916, AI969449, N47791, AI130983, AI139753, T17035, W35381, AA161140, AA398755, Z40924, AI623471, H96500, C02374, AL080013, R48316, R75672, W32995, AI247236, R59185, R40930, AI080393, T32336, AL119457, AL119399, AL119511, AL042544, AL119324, AL043152, AL042382, AL043168, AA503612, AL079794, AI927233, AI538885, AI590686, AI679179, AI431323, AI537837, AI619691, AW029186, AA848053, AI446628, AI824748, AI360195, AI610362, AI679550, AL037081, AI625464, AW150308, AL042866, AI952145, AI476620, AI288285, AI433590, AI613471, AI620868, AI631977, AI583578, AI673785, AI365256, AI524654, AI636309, AI860817, AI472536, AI874243, AI553645, AI802240, AI473652, AW075305, AW103878, AI284515, AW087199, AI500061, AW051088, AI291973, AI828795, AL041928, AW268122, AI571868, AI624529, AI890509, AI867068, AI802542, AI433157, AI648567, AI652162, AI690946, AI554821, AW151136, AW084065, AI539771, AI922561, AI432644, AI584140, AI686817, AI537677,</p>
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	AI494201, AI627909, AI500659, AW089006, AI493559, AI866465, AI459322, AI815232, AI832245, AI801325, AI682891, AI500523, AI538850, AI887775, AI582932, AI872423, AI590043, AI923389, AI284517, AI500706, AI445237, AI491776, AI289791, AW151138, AI678446, AI889189, AI521560, AI500662, AI539800, AI582912, AW172723, AI284509, AL079741, AI889168, AI440263, AW088899, AI866573, AI633493, AI434256, AI866469, AI434242, AI805769, AI554344, AI888661, AI500714, AI284513, AI888118, AI873638, AI285439, AI538342, AI859991, AI436429, AW089275, AI889147, AI623736, AI355779, AI371228, AI581033, AI491710, AI431307, AI440252, AI866786, AW151451, AI610557, AI860003, AI431316, AI242736, AI376376, AI828574, AI887499, AW151979, AI537187, AI539781, AI094489, AI076761, AI539707, AI702065, AI866608, AI963846, AI885949, AI569309, AI633419, AW089557, AI559957, AI285419, AI521571, AI469775, AI866581, AI865320, AI860783, AI567953, AI815150, AW183130, AI446495, AI570966, AI537190, AW193139, AI056694, AW103398, AI355017, AI886594, AI364639, AI610115, AW150457, AW085786, AI636788, AW129230, AW080374, AI300354, AW080379, AI872722, AI567582, AL039456, AW088903, AI610402, AI370812, AI910464, AI963019, AI624693, AL046052, AW162194, AI919593, AL047422, AI440238, AI567971, AI269580, AI539153, AW081383, AI627893, AW080298, AI345477, AI683497, AI500504, AI583065, AI933992, AI582461, H42557, AL117568, Z95126, U77594, Y11587, AB026436, AF090901, AF115392, U49434, AF058921, L10353,

	I03321, AR034821, AL137268, AL137712, AL137658, I09499, AL133049, AL133067, I89947, S83440, E12747, AL137429, AF107847, AL122049, E07108, U78525, AF119337, AF199027, AL110222, AF114170, A18777, I48978, U96683, AF047716, Y14314, AL137550, AL133081, M27260, I66342, X72889, U92992, AL049452, AL122050, AL122100, U36585, AL137463, A21103, AL122106, AL080140, AF065135, AR060234, AL080139, AL137558, A08913, AR038854, AR066494, X62580, Z72491, AF114818, AL133072, A08912, AL137480, A08910, AL137526, I89931, A08909, AL133070, I33392, U42031, AL110221, AL137256, S77771, AF032666, AF078844, AL050015, I49625, A08908, AF031147, AF200464, X72387, AL133619, AL133665, S76508, AL080060, E03348, AF017437, AL133558, E03349, AF159615, A30910, AR000422, AL117460, AL122045, X67813, AL050138, A08915, AF102578, AF057300, AJ005690, AF057299, AL137476, AL050366, I89934, AL137539, AL137488, AF038847, AR019470, AF094480, AF182215, AF113013, AL122110, A65341, AL133080, AL122098, U68233, I92592, E01314, AL023657, AL133077, A52563, AL122123, AL133104, AL133637, AF090886, A65340, AF210052, AL137574, AF090900, A45787, Y08769, I22272, AB019565, AF067790, AR013797, Y16645, AF090943, X79812, U67958, X06146, AL050172, A27171, S79832, AL133113, X66975, AL117435, AL137548, AF022363, AL080163, A08907, E02253, AF118070, AL137271, AJ242859, AF039138, AF039137, AL137660, AL050155, AL137294, Z97214, AC004227, AL117648, AF113019, AF119336, I42402, AF026124, AJ010277, AL096751, AL050393, AF113691, AF179633, AF113690, X66862, S36676, AF067728, AL080154, AF111851, Z13966, Z82022, AF183393, A58545, AL080137, AL133010, AL137555, AF000145, AF008439, AF081195, AR011880, E07361,

1659	HE8TT24	876946	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 873 of SEQ ID NO:1659, b is an integer of 15 to 887, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1659, and where b is greater than or equal to a + 14.</p>	<p>AL035458, AL137300, I00734, A08911, I89944, U75932, AF100931, X66871, U92068, A77033, A77035, A76337, AL133645, AL117626, AL137459, AL133624, AF106697, AL050116, E00617, E00717, E00778, AF030513, A12297, AF106862, I68732, A58524, A58523, A08916, AF002985, AF012536, AF113689, AF215669, X61399, AL080159, AL049460, AL137530, X80340, AL117416, AR059958, AL080234, AF061795, AL117457, AF151685, AF158248, AL137665, AF104032, X96540, M92439, AC004686, AJ001838, L13297, E15582, AL117585, X54971, AF185576, AF026816, E02152, Y10655, Y10823, AF118094, AL137478</p> <p>AA477859, AI347465, AA741252, AI672808, AA251469, AI275156, H61853, H61854, AA336646, AA676384, AI909660, AA182632, AA082822, AA311433, AA125933, AJ238376, AJ238375, AJ238374, AF161479, AJ238379</p>
1660	HSSJS63	876947	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 833 of SEQ ID NO:1660, b is an integer of 15 to 847, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1660, and where b is greater</p>	<p>AI862703, AA612688, AW249954, AI827363, AA610743, AI432650, AI802722, AI239964, AA701945, AA612922, AI361623, N33537, AI301851, AW002136, AI802741, AA176363, AA576449, AA976265, AA766161, AA918580, AA653969, AA148478, AA827535, AA808278, H93495, H62703, T17099, AI972187, N51008, AW195377, N35315, AA468340, AW272194, AA932140, H27698, H18938, AI242349, AI218074, AI915880, AA601068, AI263921, AI925918, T95492, R95678, AA287244, AI916550, AA886254, H26101, AA641272, AI985842,</p>

1661	H2CAA03	876949	than or equal to $a + 14$ .	AA284523, T64348, AI709153, AA405410, AA917562, AI625872, AA583805, AA514621, AA402915, AW299786, H28434, H21901, H21407, AI247273, T72816, H59524, T74771, AA931965, H60166, AA148477, AI767616, AI935706, AI640135, T28521, H24592, AA385649, T71664, AA835555, T72815, AI783613, H26143, R29069, L07548, D16307, AC006255, D14524, E04020, D13514, E04019, X68564, AB017196 AI200746, AA306947, AA679811
1662	H2CROI77	876952	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of $a-b$ , where $a$ is any integer between 1 to 494 of SEQ ID NO:1661, $b$ is an integer of 15 to 508, where both $a$ and $b$ correspond to the positions of nucleotide residues shown in SEQ ID NO:1661, and where $b$ is greater than or equal to $a + 14$ .	AA631215, AI924992, AW079378, AA988078, AI820581
1663	H2CBW39	876953	Preferably excluded from the present invention are one or more polynucleotides comprising a	AA315245, AB011148, A90836

1664	HHBHM68	876954	<p>nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 430 of SEQ ID NO:1663, b is an integer of 15 to 444, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1663, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1265 of SEQ ID NO:1664, b is an integer of 15 to 1279, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1664, and where b is greater than or equal to a + 14.</p>	<p>AI344224, AI343252, AI763340, AI971555, AI524277, AW195633, AW242690, AI949067, AW043627, AI949493, AI831556, AI589614, AA559876, AW118064, AW294645, AW022953, AA806680, AW068609, AA773062, AA461578, AW302627, AI962293, AA661535, AI914032, AI077935, AI350493, AA045227, AI433117, AA304941, AI475606, AI375626, AI307282, AA316518, AA814665, AA805929, AA622783, AW384234, N40708, AI355690, N29617, AA630457, AI671471, AI184753, AA251540, AI769738, AI192362, AI584155, AI040830, AW392440, N62356, AA099428, N48993, N41617, AA058804, AA167231, AA206488, AA167230, R66016, AI143758, AA669452, AA171987, AW028843, AI094496, AI219343, AI928715, AI640579, AA857867, T98791, AA130523, AA101889, AA460290, AA251498, AI868406, AI206342, R66015, AA172303, AA570042, AW401363, AW366605, AW007103, AA657969, AA635112, AA308035, AA373437, AI688532, AW068608, AI671588, D11580, H79250, AA503511, T27591, AA306546, AA330367, AW402028, AI219231, AI913403, AI630129, AA130522, AA344392, AA319396, T98790, N45715, AA569886, J02645, X53689, J02646</p>
1665	HSYBF36	876957	<p>Preferably excluded from the present invention are one or more</p>	<p>AI341667, AA180986, AI341558, AI093197, AA031711, AI694268, AI469856, N63041, N50125,</p>

			<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2495 of SEQ ID NO:1665, b is an integer of 15 to 2509, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1665, and where b is greater than or equal to a + 14.</p>	<p>AI478279, AI150599, AI597740, AI985206, AI671591, W72535, AI741942, AA037642, AI962374, AA180865, AA031648, AI800796, AA436065, AA129939, AW002265, AI074205, AI056532, AI656721, AI275143, AI337739, AW172525, W00519, AA446926, AA043021, AA830493, AI655558, AI769027, AA443349, AI095056, AA917703, W93307, AA526333, AI689128, AA777090, AW002829, AA101851, AW139517, AI128702, AI276137, AA873711, N98234, W76109, AI631104, AA856832, W92810, AA042939, H87505, AA129938, AI688779, AA693329, AI676108, T87624, AA570072, AA037641, AI186390, T74071, AA031685, AA037500, R82703, AA037234, AW380430, AA985191, R82654, H87506, AA938640, AI926907, AI916503, AI696069, AW140052, AA102060, F12449, AI671894, AW057528, AI695458, AA046964, AA725452, AI968837, AA917824, AA054749, F10070, AA917678, AA683581, AA937814, AI932475, AI984598, AA046963, AA053281, AI801723, AI499751, AA085888, AA031686, AI074981, AI279953, AI809560, AF038662, AB024436, AF022367, AF142672</p>
1666	HWMCE91	876958	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 407 of SEQ ID NO:1666, b is an integer of 15 to 421, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1666, and where b is greater than or equal to a + 14.</p>	<p>AA890722, AI695176, AI223269, W15428, AI678286, AW449557, AI344351, AW129566, AW083717</p>
1667	HUVFJ36	876959	<p>Preferably excluded from the present invention are one or more</p>	<p>AI923735</p>

1668	HLYBU84	876961	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 511 of SEQ ID NO:1667, b is an integer of 15 to 525, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1667, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1335 of SEQ ID NO:1668, b is an integer of 15 to 1349, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1668, and where b is greater than or equal to a + 14.</p>	<p>AW007548, AW369750, AI908457, AI630915, AW365081, AI817246, AI686944, AW162565, AA534893, AA033782, AA599322, AI096489, AA621824, AA176242, AA483552, AA588407, AI862878, AA427425, AA613885, AA412220, AA243477, W94878, AI460031, N95605, AA470032, AA677651, AI148140, AA902530, AA577431, AA523380, AI434640, AW026082, AI573043, AI129794, AW009274, AA554102, AA700766, AW292794, AI673429, AW160961, AW026393, AW272201, AA156869, AA075534, AI802460, AA643550, AA075634, AI086037, AI434128, AA432191, AI934640, AA936148, AA832390, AA043287, AI075001, AW009314, AA830134, AA769386, AI370761, AA075581, AA603666, AW337458, AA553892, AW380901, R36977, AI301698, AI613297, AA431171, AW190498, F36773, AA176143, AA961812, AA075591, AI201445, AA034038, AI355815, W93408, AA417790, R37629, AI538237, AA190514, R33090, AW087224, AA191034, H29313, AW057939, AI792731, AI384050, AA306868, AI016135, AI015828, T15760, R07498, AI587586, AA043626, AI034090, R00242, AA083325, AA553691, AI383781, F21581, AA156870, AA311197, F01230, AA316341, AA417694, W25045, AI147345, AI418700, AI202543, AA319535, AA933690, R07551, T60037,</p>
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1669	HWLMK6 5	876963	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 472 of SEQ ID NO:1669, b is an integer of 15 to 486, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1669, and where b is greater than or equal to a + 14.</p>	<p>AA376766, D19678, AA3111196, AA196806, H01342, F30880, AA629750, F33909, AA243536, R00351, AA302201, AA524118, W28836, AA281519, R33180, AA719927, R76589, AA083438, AA911141, AA494408, AA034119, AA295285, T23201, AI984875, AA156979, AI142352, AI971194, AI762052, AI174475, AW026079, H01393, R76588, AI086242, AA777753, AA258556, AA782087, AI651923, AI306436, AA946836, AA946830, AW139820, AA946595, AA973780, AA761539, AI088083, AA741308, AA968972, AA865328, T86736, AA459999, AA701556, AI188245, AI188276, AI000875, AA599243, N32426, AI023878, AW027063, AI088920, AI193846, AA126805, AI800579, U20272, D32257, U14134, AC004739, AC006045</p>
1670	HWLPY93	876964	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1943 of SEQ ID NO:1670, b is an integer of 15 to 1957, where both a and b correspond to the positions of</p>	<p>T86558, R74597, AA495751, AI204352, N56848, AI242056, W20015, AA460093, AA307386, AA700368, AA693860, R97459, AI806458, R97416, AA164861, AI241618, AA235676, AA362800, AA203578, AA203546, AA704439, AI862463, N35933, N45430, AI239984, AI375890, AI393761, AI378188, N35287</p> <p>AI433785, AI379875, AA403186, AW069343, AI129895, AW069233, AA534411, AA181432, AA032182, AI935567, AI376398, AI089572, AI452747, AI803472, AA447447, AA236374, AA128133, AA477274, AI038660, AA477275, AI002572, AA233880, AA447446, AA181371, AW130668, AI769036, C03202, AI277470, W07713, AA715421, AA126867, AI680552, AA404675, AA126195, C04150, F30780, AA235347, AA192944,</p>



1671	HWMBV3 7	876965	nucleotide residues shown in SEQ ID NO:1670, and where b is greater than or equal to a + 14.	AA421799, AA024985, N80591, D79794, F37772, AA127217, AA027110, Z36263, AI925660, F35592, AW263312, AI139845, AA247376, AI038015, AI128210, AA193137, AL119598, AA249326, AA629114, F31719, AA232826, AA729266, AI193315, AA249762, AW373642, AW373769, AI375939, AI383560, T29636, AW391401, AF114264, AF056035, AF056034, S67069 W05557, AA278474, AA485179
1672	HCDME16	876966	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 801 of SEQ ID NO:1671, b is an integer of 15 to 815, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1671, and where b is greater than or equal to a + 14.	AI380296, AW206501, AI393559, AI369479, AI362907, AI125368, AW272471, AW136950, AW273903, U46350, U46345, AF166331, M60329, AJ272227, X86395, X86396
1673	HCRQM25	876967	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by	Z46094

1674	HWMBV7 2	876968	<p>the general formula of a-b, where a is any integer between 1 to 577 of SEQ ID NO:1673, b is an integer of 15 to 591, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1673, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 602 of SEQ ID NO:1674, b is an integer of 15 to 616, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1674, and where b is greater than or equal to a + 14.</p>	AA863064, AI637610, AA075674, AA075545, AA206591
1675	HICRQK24	876969	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 653 of SEQ ID NO:1675, b is an integer of 15 to 667, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1675, and where b is greater than or equal to a + 14.</p>	AI032744, Z60017
1676	HWLOK80	876971	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by</p>	AA694142, AA815120, AA749173, AI005429

1677	HNTBD04	876975	<p>the general formula of a-b, where a is any integer between 1 to 817 of SEQ ID NO:1676, b is an integer of 15 to 831, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1676, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1305 of SEQ ID NO:1677, b is an integer of 15 to 1319, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1677, and where b is greater than or equal to a + 14.</p>	<p>AI379864, AI081896, AW131833, AW170478, AI806491, AI378805, AI709093, AI491963, AI343481, AI083547, AA411203, AI718197, AA281624, AI379105, AI379556, AI361971, AA844487, AA422096, AI493410, AW370896, AI380997, AA583293, W04273, AW370895, H50534, AA465371, AA281683, AA890322, AI671250, AA465447, AA581543, H68367, H68369, AA338712, AW152574, T40124, R36504, T10779, R83236, AI699600, AI239994, AI333199, AW183647, AA353157, L48692</p>
1678	HWLUV59	876976	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 456 of SEQ ID NO:1678, b is an integer of 15 to 470, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1678, and where b is greater than or equal to a + 14.</p>	<p>AI889597, AI684260, AI351574, R98436, H51098, AI631843, AW291703, AW300604, AW194814, AW370191, AJ224747, AJ224748, AJ001306</p>
1679	HSUSFI3	876977	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by</p>	<p>AI085974, AI858091, AI720077, AW072390, AI989948, AI934584, AW117525, AW237303, AW150311, AI692995, AI815035, AW102807, AI832505, AI922557, AW069468, AA446165,</p>

			<p>the general formula of a-b, where a is any integer between 1 to 1112 of SEQ ID NO:1679, b is an integer of 15 to 1126, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1679, and where b is greater than or equal to a + 14.</p>	AW377667, AI342228, AW295915, AA843597, AA031368, AA031369, AA506182, AI338064, AW002066, AI128919, AI083953, AW367975, N27866, AA582219, AI751107, H96650, W47079, AI129845, AI953830, AA976702, AI750786, AI366199, AI014661, AI090678, H96654, AA846208, AA018530, AW085102, N92750, AI142994, W46779, AA044355, N40640, AI031911, AA913602, AA506298, AA769731, W78040, AA917375, R68943, W46978, N20969, AI750787, AA102449, H28051, W32033, N40269, N30984, R67524, AW367978, AA876079, H26305, H84840, AW074611, R70575, AA883585, AA725372, H13743, AI751106, W19406, AA778022, R70485, AA044033, H00808, AA055964, AA296636, AA459816, R78950, H26464, AI300644, AA642011, AA508205, AA508225, AW235801, AA649284, R24391, AA508374, AA035658, AA301832, AA296525, R21974, H88611, AA506194, AA370945, T90836, AI025235, H88612, AA055963, AA857378, R67525, AA018277, AI828914, R24281, H98539, AA337106, AA374691, T85743, H39859, R68830, R21973, AW366386, D61749, N28622, AA322178, AA975143, AA096079, AW025044, AI040706, AI459355, AW367977, W31440, AA302828, AA382269, AA382270, AA459696, R57416, AI684270, AI523423, AI554821, AI686576, AI537303, AI590021, AI624548, AI868204, AI955906, AI637584, AI818353, AI089970, AI581033, AI564290, AI569975, AI866469, AI440260, AI884574, AI621341, AI609409, AI458237, AI564719, AW008779, AI950892, AI927233, AI540674, AI538692, AI670002, R36271, AI698391, AI909661, AI866465, AI610690, AI783861, AI537273, AI866801, AW262042, AI800380, AI453328, AI538850, AI036901, AW118518, AI633125, AI697324, AI978703, AI583065, AI537244, AI538716, AA761557, AW160916,
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	AI623941, AI560023, AA641818, AI815232, AW071177, AI569309, AL134259, AW410259, AI702073, AL047100, AI537191, AW198090, AW149311, AI567944, AI696340, AW148408, AI612913, AI474646, AI440238, AW083804, AA715307, AA809974, AI432969, AI539260, AI860027, AL036923, AA470491, AI862139, AI819326, AI433157, AI654750, AI499393, AI539771, AI520785, AW151132, AI366900, AA835801, AI355779, AI923989, AI537677, AW051088, AW087207, AW169671, AI886206, AW161156, AI635492, AW105383, AI879377, AI690410, AI863382, AI872423, AI091468, AL038986, AW151766, AI524654, AI625595, AW073996, AI798456, AI804585, AI801325, AW022682, AI522052, AI439087, AW082033, AW104724, AI859991, AI573032, AF125535, Z92846, U00763, U01145, AL080140, A83556, I48978, AL035458, AC005291, A77033, A77035, AC007298, M81784, AF081195, U95739, AL080163, AF081197, A91162, AL050138, E08631, I89947, AF087943, AL050149, U72620, A76335, AL137459, E06743, AL110222, AL137480, AF098162, AL133665, AF100931, AL137558, X80340, AL137550, AL110218, AF061943, AF126247, AL049283, AL050024, X65873, AL050277, A08910, A58524, A58523, A08909, I48979, X61970, AL137526, Y16645, A08908, AL096744, A08913, Z37987, AF061795, AL080239, U62807, AF151685, AF039138, AF039137, AF201468, AR038854, AL133075, AF032666, X82434, AL122049, AL133640, AL133568, AF030513, X53587, AC004383, AF097996, AL137557, A65341, AF090900, U80742, AL122093, Z97214, AF104032, AL137476, X81464, AF078844, AL133080, AL049382, I26207, X84990, AL122100, AL137529, AL117457, AL117435, AR011880, AF026816, AJ006039, AF177401,

				<p>AL137488, Z35309, AL133560, I89931, AB016226, AL133557, AF184965, AR034821, AF008439, AL137463, I49625, A08907, AL122110, X53777, AL133072, AL110280, A08916, AF125948, AF090934, AF028823, AJ000937, AL117587, AL080074, AL137554, A91160, Y14314, A08912, AL137656, AC004822, A23630, A18777, AL049430, AL137533, AF079765, A03736, AL049347, U88966, X72889, A08911, AL122121, AF113691, AL137560, AL137538, AF090901, X93495, AL133031, I96214, AL080159, AL117626, AF090903, AL133016, I09499, AL122045, AF061981, AL080148, S76508, AL122123, AL050366, AR034830, AL137627, AF113019, AL133558, Y18680, AL122050, I33392, AF113699, Y13350, AL133081, AF079763, AF111849, E07108, Y09972, AF067728, AL133077, AL110225, S68736, AL122118, I32738, AL133113, A18788, I89934, AL080110, AF091084, AF031903, E05822, AF111851, U35146, AF183393, I03321, AF106862, AL137479, M80340, I89944, A21103, Y10655, S75997, L13297, S36676, AL122111</p>
1680	H2CBE41	876978	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 616 of SEQ ID NO:1680, b is an integer of 15 to 630, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1680, and where b is greater than or equal to a + 14.</p>	<p>AA307330, AI032392, AI434808, AI632534, AW136621, AI992345, AI637461, AA836544, AA745059, Z21538, D20524, D80522, D81026, AW377671, D58283, D59889, D80133, D80043, D80022, C14331, D80248, D81030, D59859, D80188, D80166, D50979, D80195, C15076, D80269, D59467, D51423, D59619, D80210, D51799, D80391, D80164, D59275, D80240, D80253, D59787, D80227, D80212, D59502, D57483, D80196, D80219, D59927, D50995, D80251, D80038, AA305409, D80193, D59610, C14389, D51060, D80378, C14429, D80024, D80366, AA305578, D51022, D59373, D80045, C75259, AW177440, AA514188, D80241, C06015, AW360811, AW178893, D80268, T03269, C14014, D59627, AA514186, AW375405, AW360844, D80014, D80132, AW179328, AW177501, AW177511, D51213, D80247,</p>

	AW378532, AW366296, AW352170, AW360817, D80302, AW375406, AW378534, AW352171, AW179332, AW377672, AW179023, AW178905, D80439, AW177505, AW178775, D80064, C05695, AW377676, D81111, AW178762, C14227, AW360841, D58101, AW352117, D80134, AW178906, D51250, AW178909, D59503, D58253, AW177731, AW178907, AW178754, AW179019, AW179018, AW179024, AW369651, AW367967, AW352158, F13647, AW179020, AW176467, AW177456, AW179329, AW178980, AW360834, AW177733, AW378528, AW178908, AW178971, D51103, AW352174, T02974, C14407, D51759, D80157, AW179017, AW179004, AW179009, AW179012, AW178914, AW378543, AW378525, AW352163, AI910186, AI557751, T11417, AW378539, D80168, AI905856, T03116, AW178774, AW178911, AW177722, AW177728, D59653, T48593, AW378540, C14298, AI557774, D45260, AW178781, AW352120, C03092, D60010, H67866, AA809122, H67854, AI525923, Z21582, D52291, AW367950, D59695, D80949, C14344, AI525917, D59317, D45273, D58246, D59474, D80258, AI525227, AA285331, C14046, C14973, AW177734, AW378533, D51079, AA514184, D51097, AW167716, AW178986, D51221, C16955, C14957, AI525920, AI535686, D59551, AI525912, D60214, AI525235, AW179013, H67858, T03048, Z33452, AI525242, AI525925, AI525215, F13796, AW378542, C05763, U38654, AF154840, AF125393, U57094, A62300, A84916, A62298, AJ132110, AF058696, AR008278, AR018138, AB028859, D34614, X67155, Y17188, D26022, A25909, Y12724, A67220, D89785, A78862, A82595, A94995, D88547, AR008443, AR060385, AB002449, X82626, AR016808, AR025207, I50126, I50132, I50128, I50133, AR066488, AR016514, AR060138, A45456, A26615, AR052274, AR054175, AR038669, Y09669, A43192, A43190,

1681	HWLFY03	876980	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 598 of SEQ ID NO:1681, b is an integer of 15 to 612, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1681, and where b is greater than or equal to a + 14.</p>	<p>AR066490, I14842, AR066487, A30438, Y17187, I18367, AR008277, AR008281, A63261, D50010, A70867, AB012117, AR062872, AR016691, AR016690, U46128, X68127, AR008408, A64136, A68321, A85396, D88507, AR066482, A44171, I79511, A85477, I19525, A86792, D13509, AR060133, X93549, X72378, AF123263, AR032065 AA307778, AL119084</p>
1682	HE2JX48	876981	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1180 of SEQ ID NO:1682, b is an integer of 15 to 1194, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1682, and where b is greater than or equal to a + 14.</p>	<p>AA426499, AW081325, AI985955, AW021040, AI160194, N51691, AI139313, AI378674, AA622963, AI624270, AI656023, AI418379, AI095120, AI634162, AI362188, AI190851, AI091497, AA009944, AA418983, AI336531, AI394274, AA857944, C15793, AI214264, AI277517, AI346314, N47105, AI361996, C16060, AW192963, D57940, AI536992, AI304548, AA918156, C16528, N40979, N67845, AA393695, AA857656, AI659750, H95189, AI493625, C16468, D56642, AI094425, AA552961, AI080394, R81446, AW439682, N51633, D56627, D56835, N44986, H88689, AI589928, AA379627, R76880, AI832292, H88648, C16043, D57541, D57973, AA328571, D57430, AA360724, AI089758, C16179, C16087, D79736, AI445344, D56588, R32408, AI470720, R81649, AI279894, AI933918, AI218414, R69853, AA056022, AI333062, AI004951,</p>



AI088814, AI301446, AI301394, AA775678, AA603697, AI151369, AA775618, AI961728, D56917, AI151348, AI921968, H88952, AI423219, AA101875, AA345303, AI379653, AI218413, AA148883, R69854, AI553652, C16222, AA247850, AI638373, D62852, D57431, C16128, T99176, AW073968, C21346, D79319, D25644, R57315, D62988, C16117, C16253, N50313, AA918998, R32407, AI096770, AA479361, AA564604, AA479186, R77041, AA478645, AW205520, AW069594, AW104938, AI755000, AW069627, AI264950, AI362021, AI584053, AI367672, AW337368, AA206329, AW128957, AA666020, AI249775, AI130987, AW198220, W74332, AW338136, AA872307, AA171971, AW241261, AW338347, AA148956, AI916347, AA554374, AA862791, AI718186, AA150911, AI659417, AW026625, AI190520, T27978, H89035, AA975415, AA479472, AI911934, AI819270, AA256999, AA977736, AA723064, W72577, AI336178, AA722599, AA905491, AA075265, AI580783, N26834, AA532639, AI193987, AA142873, AI620284, Z20033, AI039612, R62837, AI433157, AI358578, AI500659, AI500523, AI284517, AI275175, AI539771, AI433976, AL045500, AI537677, AI281773, AI491776, AI801325, AI499463, AI624206, AA452612, AW151138, AI696612, AI815232, AW148320, AL045266, AW008048, AI282655, AI572787, AW075351, AI524671, AI274508, AI889376, AI866457, AI282281, AW087445, AW075413, AI432666, AI567940, AL036802, H52440, AI436456, AI610362, AI270707, R64680, AI963846, AI612913, AI554821, AI783504, AI866608, AL121286, AI637584, AW238730, AI538716, AI862144, AI926790, AI500077, AI702406, AI921248, AI590120, AI571909, AL040243, AI702073, AI349598, AI269862, AL038605, AI249323,			
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	AI702068, AI869367, AI281772, AI631107, AL036396, AI610402, AI281837, AW170635, AW051258, D45889, A74912, I89947, I48979, A08916, A08913, I89931, D13542, I48978, AL137527, AF091084, L31396, AL133640, L31397, AL049452, AF104032, AL122049, AF113013, A03736, AL049430, AF113677, AL050116, AF106862, AL137557, AL122098, A08910, AL050277, AL117457, A08909, AF090943, AF146568, AL080159, S78214, AL133016, AF113699, AL137459, A65341, E07361, AL133080, AF113691, AL080060, A77033, A77035, I33392, AL110196, AL137463, AL133113, AL049466, AF113019, U42766, Y16645, AF113690, AF090903, AL117460, AL050149, AL080124, Y11587, AL050393, AF090934, AL137271, AL049938, AF125949, AL133557, AF177401, U35846, AL049283, AL133565, AF078844, AF090901, AL049382, AL050146, AF090900, I49625, Z82022, AL117583, AL133093, AL122110, AJ242859, AF113694, A58524, U80742, E03348, AF067728, AF113689, AB019565, Y11254, AL049314, AF113676, AF118064, A58523, AL122123, AL110221, AR059958, S68736, AF125948, AF090896, AL122093, AF158248, AL050108, AF118070, AL050138, AF183393, X84990, X72889, AL137550, AL122050, AL133072, X82434, AF111851, E02349, AL133075, AL133560, AF017152, AF017437, AL117435, AF118094, AL080137, I03321, AL122121, AL133606, AF087943, AR011880, E07108, AL096744, AL117394, AL110280, AL050024, AJ000937, AL117585, AL049464, U91329, E15569, A93350, AL137648, A93016, X63574, U67958, AF097996, I42402, U00763, A12297, X93495, AL137538, AJ238278, AF079765, AL110225, I09360, AL133077, I26207, AL137521, AL049300, Y14314, AL137283, U72620, X96540, AF119337, AL080127, X65873, X70685, AF026816, AJ012755, AL133067, AF153205,

1683	HNFD27	876983	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1000 of SEQ ID NO:1683, b is an integer of 15 to 1014, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1683, and where b is greater than or equal to a + 14.</p>	<p>A08912, AF061943, AR038969, E08263, E08264, AL137560, AF185576, X98834, AL110197, AL050172, AL133014, AL137480, S61953, AL133104, AF111112, AR000496, U39656, AF026124, AF057300, AF057299, AL137523, E05822, AL137556, Z37987, AL133568, AL137476, AL137526, AR038854, U58996, AF079763, AF111849, AJ006417, AF003737, AF061981, X87582, AL117440, AC004383, U49908, AL133098, AL137488, AF061573, AF032666, A45787, U96683, Y09972, I00734, Y07905, AF051325, X92070, AF162270, E00617, E00717, E00778, U78525, L19437, A07647, Z72491, M30514, AF177767, AL122118, X53587, AL080074, AL137300, AL137533, AF106827, AC002464, AF106657, AF008439, AR020905, AR013797, A90832, L30117, I17767, E08631, AF095901, E04233, U68387, I09499, AF139986, AL133031, E02221, AF118090, AL122111, AF210052, AL122100</p>
1684	HWLXS11	876984	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 417 of</p>	<p>AI742835, AI469703, R98751, R83167, AI538038, AI215412, T96765, AA206614, R93713, AI678748</p> <p>AI692881, AI240606</p>

1685	HCRPG94	876985	SEQ ID NO:1684, b is an integer of 15 to 431, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1684, and where b is greater than or equal to a + 14.  Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 555 of SEQ ID NO:1685, b is an integer of 15 to 569, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1685, and where b is greater than or equal to a + 14.	AA307658, AW381667, AW295050, AI525535, AF095791, AF220152
1686	HCUG073	876987	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 908 of SEQ ID NO:1686, b is an integer of 15 to 922, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1686, and where b is greater than or equal to a + 14.	AI581133, AI183335, AI591306, AI859797, AI474090, AA757640, AI076898, AI559591, AA457735, AW173564, AW204070, AA480846, AA767766, AI526090, AI392866, AA723065, AA939140, R52542, AW103638, AA766199, AA757573, AI591339, AI910407, AA036665, W47118, AW020710, AA580663, AL039858, AA708505, AI002285, AW090087, AA641818, N63128, AI440263, AL040827, AI889256, AA939199, AI866465, AI401697, AW263804, AI538850, AI688848, AL120853, AI886440, AI859782, AW161156, AA557132, AI567961, AI801325, AW020373, AI587000, AW020397, AI624950, AI500714, AA056265, AW020693, AI581033, AI961414, T99953, AI918554, AW167918, N99092, AI619513, AI345005, AL041016, AI340627, AI570861, AI889147, AI582932, AL121564, AI685798, AI698391, AI345014, AI538564, AI915291, AW152182, AA420722,

	AW161579, AI471909, AI923989, AI284517, AI590043, AI491852, AL047422, AI889189, AI811192, AI917994, AI473536, AI340982, AW079432, AA857847, AL049048, AI866469, AW151979, AA741027, AI371251, AI859991, AI884318, AI440238, AI624245, AI568061, AW075382, AI923750, AI348854, W74529, AI866573, AI702343, AI539260, AA042949, AA502794, AW191003, AW071380, AL036923, AI334893, J05272, AC007283, U00978, A91160, A91162, I48978, Y10080, X06146, A21101, I52013, AF125948, U49434, AL133080, A83556, AF017790, A08910, AI8788, D89079, AL117440, A08909, S83456, A49139, AF047716, A58524, A58523, AF119337, A08908, X70514, AL137292, I30339, I30334, A08912, AJ006417, E12747, AL136884, S63521, AF087943, A07647, U42766, AF124435, AL122045, AL133072, AF113013, I00734, I48979, A76335, S77771, E00617, E00717, E00778, AL137476, AR038854, A08907, AL050172, U58996, X15132, E04233, A08913, AL137459, AF146568, U72621, AL096720, A12522, A18777, I89931, Y18680, AF111849, S76508, D16301, A08911, I89934, I89944, AL050149, I49625, AF094480, L04849, Y08864, AJ000937, AL137640, AL049430, AL080154, I46765, AL122100, AJ003118, AL117587, AL050280, AF159148, AF026124, AF106945, AF118094, AL117460, U62807, AL049996, AB016226, AF113019, AL133637, AF100931, Y16645, S36676, AL110196, A77033, A77035, AL080159, AF143957, AF079763, Z37987, AL117457, Y14314, AL080156, AR038969, AL137488, AF090901, AL080126, X65873, U35846, L04504, AJ012755, I89947, A17115, A18079, A15345, AL080124, X62580, AL049382, X63162, AL117649, AL110158, AF090903, AL050116, AF061981, I32738, AB030279, AL080163, AL133112,

				AL137267, I68732, D83032, L13297, A08916, AF031903, AF118090, AL133568, AL110225, AL122123, M80340, AC004200, AF179633, AL137463, X81464, AL137627, AR013797, AF207750, AF113690, AF017437, X66871, AL133558, AL049283, I33392, AF051325, AL049464, L30117, M85164, M27260, AF199027, AF180525, U78525, AL133569, A52563, AL137527, Y07905, AF139986, AR068466, AL137548, AL137665, AF061943, U72620, AL137550, AL137539, AL117648, AL049347, AF038847, Y10936, A90844, AL137560, E02349, AL110296, AF090886, AL096744, I25049, I25048, AF177401, X86693, AF039138, AF039137, AL117394, AL133010, AF112208, AJ005690, AL137479, X72889, A90832, AL133665, I80062, E02152, I79595, AF002985, S75997, AF113694, X82434, AF119336, AF090943, AB031064, AF069506, AL133624, AL110221, X54971, U57352, AF016271, AL117443, AL137641, AL137480, AL049452, I29004, X66417, AL110159, AL133560, S61953, Z48796, AF028823, AL137283, I28326, AF067728, X87582, U67958, A93350, AL137529, E07108
1687	HPMDD49	876989	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1582 of SEQ ID NO:1687, b is an integer of 15 to 1596, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1687, and where b is greater than or equal to a + 14.	AL134806, AW408278, AW382759, AA315582, N43819, AW393044, AA310712, AA321625, N26436, AW393061, AA089543, AA740922, AW364275, AW402662, AA281391, AI540961, AI271339, D25278
1688	HCNSF23	876990	Preferably excluded from the present invention are one or more	AI394043, AI198754, AI198169, AA969930, AI739036, AI268413, AA861762, AI222281,

1689	HKDBC15	876991	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 315 of SEQ ID NO:1688, b is an integer of 15 to 329, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1688, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1259 of SEQ ID NO:1689, b is an integer of 15 to 1273, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1689, and where b is greater than or equal to a + 14.</p>	<p>AA883969, AI312584, AW197737, AI3337319, W60319, AI476496, AI420953, AI816942, AA917042, AW418714</p> <p>AI862551, AI765006, AI917375, AI972770, AA552639, AI218562, AI768706, W65408, AI350781, AI640306, AA574291, AA468717, AI307307, AA055447, AA514669, AA574359, AA516276, AI658818, AI886513, AW104092, AI056398, AW291148, AW026517, AI537287, AI493566, AI420453, AI962537, AA468798, AA477076, AA055446, W61322, AI669652</p>
1690	HSIGM23	876992	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1006 of SEQ ID NO:1690, b is an integer of 15 to 1020, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1690, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1006 of SEQ ID NO:1690, b is an integer of 15 to 1020, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1690, and where b is greater than or equal to a + 14.</p>	<p>AA504588, AI138384, R78587, R64412, AA236105, AI367325, R26008, H25950, AI359774, AI222758, AI285942, AI499688, AW072370, AI042411, AA928406, AI817207, AI130765, AW016387, AI082279, AI073537, R78588, R63806, AA405549</p>
1691	HCQBN43	876993	<p>Preferably excluded from the present invention are one or more</p>	<p>AI688703, AI761358, AI813766, AW182487, AI829360, AI380125, AI890417, AW377304,</p>

1692	HCQB003	876994	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1622 of SEQ ID NO:1691, b is an integer of 15 to 1636, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1691, and where b is greater than or equal to a + 14.</p>	<p>AI934593, AW377372, AW377334, AW377268, AW375342, AW377315, AI357827, AW377285, AW377266, AA305061, AI559533, AW377387, AW377252, AW377383, AW377255, AI283201, AI286089, AW377339, AW377240, AW377223, AA515982, AI343596, AI475146, AW193361, AW377246, AA579699, AI289618, AW351695, AA503064, AW377220, AI803822, N49117, AW375369, AW351685, T29359, AW377256, AW375332, N48341, AC000061, AR016032, I11500, I66544, M55131, M76128, A83151, U20418, A49045, AF162427, I66545, AF016950, AF162400, AF013753</p>
1693	HCQCF85	876997	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 821 of SEQ ID NO:1692, b is an integer of 15 to 835, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1692, and where b is greater than or equal to a + 14.</p>	<p>AW369811, AW014155, AI334392, AA664276, AA608594, AA984631, AI954111, AA410972, AA586953, AW194426, AI445882, AI420061, R11024, AA911063, AI335787, AI623204, AA419568, R11072, AA864381</p>



1694	HUVFS16	876998	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1259 of SEQ ID NO:1694, b is an integer of 15 to 1273, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1694, and where b is greater than or equal to a + 14.</p>	AA443167, AL046148, AA243821, AA492497, AA243686, AA405113, AI351901, AA463466, AA011361, AL043877, AB020669, AF054828, AF068920, AF068921
1695	HCQBD51	877000	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 786 of SEQ ID NO:1695, b is an integer of 15 to 800, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1695, and where b is greater than or equal to a + 14.</p>	AI635096, AA165632, AA523697, AW166525, AA769127, AW129960, AI686907, AI768699, AW136550, AI915606, AW188763, H79957, AI540313, AI769970, AA719353, AW151462, AW418915, AA829144, AA165668, AW182418, AW102605, AA757716, C16515, AA907061, AA860897, AI217462, AI217382, AI239881, AA703100, AA577904, R21911, AI637789, N87490, N42130, AI764980, AI936236, AI141067, AA649747, AA642829, R69594, AA528274, AA992380, AC006047, AP000509, AC004185, D84394, AL080317, AC005406, Z97876, AC009542, AC009330, AF058907, AF196971, Z98750, AC011604, AL030998, Z83820, AC004707, AC004617, AC004691, AC007319, Z97054, AC005908, AC003983, AL023280, AL031073, M74509, AC010209, AF026254, AF026248, AF026249, AC003678, AC003689, AC002094, U77841, AC004772, AL022147, AC004924, AC003093, AC004985, AC005574, AC003082, AL049697, AR036572, U91328, AC007206, AP000083, AC006023, AC002536, Z83839, AP000689, AC002059, AJ239329, AP000688, AB003151, Z98257, AC006017, AC005632, AC003087, AC006335, AC007317, AC022517, Z97198, AC000385
1696	HCRMU18	877001	<p>Preferably excluded from the present invention are one or more</p>	AA486568, AI733856, AA077667, AI090377, AA831426, AI336771, AA493546, AA670392,

			<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 504 of SEQ ID NO:1696, b is an integer of 15 to 518, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1696, and where b is greater than or equal to a + 14.</p>	<p>AI816058, AC005914, AL035681, AL050307, AC009516, Z83826, AC005015, AC007041, AC004706, AC005484, AC004819, AC007536, AL121825, AF067844, AP000512, AC004962, AC007685, AF109907, AC005412, AC009247, AC005274, AF027390, AC002477, AC006487, AC006011, AL022318, U62293, AC005730, AC005069, U22376, AC005800, AL139054, AC007216, AC004150, AC000353, Z95114, AC005754, AL049569, AL049766, AC005013, AC005081, AB023049, AC006581, AP000558, AP000045, AL080243, AC009248, AC005071, AC004686, AL109628, AC007073, AC005971, AL035461, AL022721, AC005164, AL096791, AC005057, D84394, AL121658, AC006251, AC009721, AC003663, AC007371, AL049869, AL031432, L44140, Z98950, AC005520, AP000031, Z98946, AL022238, AC006511, AP000557, AC004668, AL031666, AF207550, AC005488, AC005358, AL117694, AC019014, AL121603, AL021940, AC007226, AC005632, AC005670, AC005529, AC006006, AC008115, AC002300, AL035086, AC005200, AC004491, AL023807, AF200465, AP000116, AC007676, AC004149, AF129756, AC007899, AC005740, AC006961, AC004913, AC005088</p>
1697	HONAN63	877002	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 530 of SEQ ID NO:1697, b is an integer of 15 to 544, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1697, and where b is greater than or equal to a + 14.</p>	<p>AA305628, AA308609, AA300521, AA356487, AA363124, AB020712</p>

1698	HCQCU65	877004	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 518 of SEQ ID NO:1698, b is an integer of 15 to 532, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1698, and where b is greater than or equal to a + 14.</p>	<p>H73991, AI770045, AI866911, N24909, AA418453, N20611; AC006153</p>
1699	HCRNO79	877005	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 175 of SEQ ID NO:1699, b is an integer of 15 to 189, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1699, and where b is greater than or equal to a + 14.</p>	<p>AA987568, AL035420</p>
1700	HCRMO22	877006	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 624 of SEQ ID NO:1700, b is an integer of 15 to 638, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1700, and where b is greater than or equal to a + 14.</p>	<p>AB028946</p>

1701	HFDME46	877007	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 681 of SEQ ID NO:1701, b is an integer of 15 to 695, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1701, and where b is greater than or equal to a + 14.</p>	<p>AA074619, AW375400, AW389301, AI909808, AW389291, AB014603</p>
1702	HCWHN82	877008	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 531 of SEQ ID NO:1702, b is an integer of 15 to 545, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1702, and where b is greater than or equal to a + 14.</p>	<p>AI283018, AW451644, AA889452, AI369736, AA971331, AI811185, AA991486, AA146655, AI888354, AA319058, AW388636, AI569358, AA877264, AI473558, F35033, C17917, AI952676, AI752007, AI860674, AW378122, AI687473, AW364312, AI209004, AI476109, AI446124, AW084219, AI567637, AW168485, AI805638, AW189268, AI244380, AI564515, AW088903, AI866002, AI678021, AW088899, AI701975, AI359590, AI696819, AI817543, AI365256, AI358042, AI610645, AI682075, AW409775, AI587288, AI886532, AW044626, AI697324, AI687362, AI499263, AW151729, AI280661, AI537617, AI611743, AI612759, AI570966, AI915243, AI633419, AI537991, AA603709, AI288285, AI866082, AW089179, AI690924, AI952302, AW085786, AI569309, AW023338, AI799199, AI569328, AI677797, AI249877, AI890057, AI471361, AI648408, AI539153, AI619716, AI867042, AI566630, AW265004, AI472536, AI919345, AW130863, AW168795, AI366549, AI636719, AI866741, AW002174, AA807088, AW118518, AI829327, AI805688, AW083804, AI696626, AI249946, AI589993,</p>

AI241792, AI800138, AI583961, AW023590, AW082600, AI282504, AI598061, AW151785, AI620868, N74355, AW103886, AI961310, AW090451, AW083189, AI813919, AW059713, AI969641, AI687465, AI554343, AI699011, AW193203, AW189933, AI560052, F34958, AI922577, AI874151, AI613471, AI620093, AI635299, AI680498, AW151714, AW129230, AA830821, AW089006, AI274013, AI699862, AI890182, AI282508, AI567993, AI539771, AI873638, AI866608, AI476371, AI580674, AI475394, AI266436, AI888621, AI951446, AW149876, AI554344, AW078710, AI470293, AI567351, AI631112, AI491783, AI924721, AI339435, AI540823, AI698401, AI802240, AI572717, AI952920, AI251830, AI805769, AI434242, AI783861, AW103441, AI568296, AI921734, AW075522, AI620287, AI866786, AI568132, AI473528, AI590999, AI922996, AI828574, AW079159, AW151750, AI811912, AI799234, AI670782, AI280670, AW409687, AI567302, AI912866, AI439443, AW242116, AI697420, AI863357, AI364788, Z98484, AI828731, AI554484, AI885982, AI474107, AI955604, AI632408, AW151034, AI540821, AI472422, AW172723, AW170663, AW089436, AW081231, AI799195, AI682720, AW129170, AW151847, AI696186, AI590686, AI269580, AI573026, AI587606, AI254727, AI343582, AI468872, AW163823, AW089327, AI698427, W46547, AI824746, AW079075, AI631212, AI433976, AI564749, AL110306, AW081255, AI922901, AW148716, AI627909, AI954075, AI873604, AA848053, AW406745, AI249962, AI801608, AI499621, AI697099, AI537076, AI929108, AL046463, AI758816, AI589668, AI336575, AI689579, AW268261, AI741926,				
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AI400725, AI432790, AI863014, AI932794, AW151681, AL031228, D84401, E12645, AF117221, D82060, AL117578, AL137556, AL133014, A18777, AL080074, AL122098, AL137558, AF012536, I48978, A08916, I89947, AL080137, A08913, I89931, A08912, A08910, E03348, I49625, E03349, A08909, U42031, AL050138, S77771, AR038854, AL133645, A08908, AL137300, X80340, X93495, AF067790, AF119337, AF000145, I26207, D83989, U67958, Y08769, AL122045, I66342, AF106657, AL133010, U88966, AL080124, AF162270, AL137292, AL122111, L30117, AL080127, AL137705, AB019565, AF017437, AF065135, AF210052, AF205861, AF185576, I89934, I89944, AF113689, E02253, AR059958, U96683, X79812, AL137640, S68736, U80742, A12297, X96540, A77033, A77035, S76508, AF000496, D89079, U39656, I42402, E15569, AF032666, AL137463, AL080060, AL137429, AL133067, AR038969, AF132676, AF061836, AL137538, AF090886, AL137712, AL137527, E02221, AF111112, AL137526, X00861, I09360, AL133093, X87582, E05822, AF215669, AL122106, X84990, AF017152, AL133665, AF125949, A45787, AL133077, AL137658, AF030513, AL137294, AF113691, AL110280, A18788, A93016, AF078844, AF118070, A93350, Y14314, AL080140, S79832, AF022363, AL122121, U72620, X72889, A65341, J05032, AL133016, AL137273, AL117432, AF104032, I48979, AF003737, X72387, E04233, AL110221, AL117440, AL122118, AL049465, AL137476, AL050277, AL133104, AF114170, A65340, AL133558, Y11587, U00763, X62580, AL049382, AL137574, U78525, AF090901, AL133072, AF113013, AF008439, X81464, I41145, S61953, A21103, A08911, AL080086, AF113019, AL049460, E15582, AF028823, AF100931, AL122049, L19437, Y16645, AF118064, AL137478, AL122050, AL080159,				
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1703	HHPEK59	877009	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1606 of SEQ ID NO:1703, b is an integer of 15 to 1620, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1703, and where b is greater than or equal to a + 14.</p>	<p>AL133640, AL133098, X52128, AF159615, I17544, AL133557, AB007812, AL080158, X92070, U87620, S69510, AL133075, AF061795, AF151685, AF113676, AL096744, AJ003118, AF158248, U49434, AF061981, AL133568, AF146568, AL080148, AL133113, AL133565, E01614, E13364, AF106862, AF081197, AF081195, X53587, AC002467, X82434, A08907, AR019470, I33392, Z82022, AF176651, AF183393, AF153205, AF106697, A52563, AF139986, A08915, AF057300, AF057299, AL137283, AL117585, Y10080, AR068751, S75997, AR029490, Z72491, AL133081, AL049452, AL117460, L31396, I80064, AL137521, L31397, S78214, M92439, A15345, AL049464, AL117648, AF090934, AF118094, AL137557, U95114, AL110196, AL049466, AF118090, AL049314, AL080154, I03321, U58996, E06743, A90832, AA149062, W55857, AI654104, N91520, AA398769, AL041623, AA149063, AA307763, AW450873, AI082461, AA709060, W06955, AI079909, AI920841, AA292830, AI268616, AA191706, AA010085, R07052, Z44437, T87013, T12757, Z40368, AA844584, AI955471, W55858, AW135814, T52489, N48933, T56321, N46430, AA864954, AI274165, AF027218, AF027219, AF155101</p>
1704	HKCTB07	877010	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 391 of SEQ ID NO:1704, b is an integer of 15 to 405, where both a and b</p>	<p>AF105020</p>

1705	HFPI222	877011	<p>correspond to the positions of nucleotide residues shown in SEQ ID NO:1704, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1578 of SEQ ID NO:1705, b is an integer of 15 to 1592, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1705, and where b is greater than or equal to a + 14.</p>	<p>AI458123, AA770557, AW299665, AW236534, AI952929, AI340145, AI339835, AI650682, AI472033, AA256229, AI268229, AA678840, AW190757, AI075831, AI631649, AL138340, AW080424, AA293773, AI373728, AA704702, AA677322, AI033016, AW204318, AA848089, AI891160, AA399568, AA227660, AI001981, N24286, AA747722, AI537348, AW025794, AA218733, AI865908, H98718, H64686, R38180, R17022, N70123, AI493281, AW007482, H70397, AW134908, AA334373, W04161, R09968, AA394090, R16715, T77116, W01375, AI690748, AW169604, AI624293, AI267162, AI245731, AI273189, AI627988, AI698391, AI368579, AI969655, AW149925, AL046835, AI690687, AI524654, AI289310, AI868204, AW051088, AI869377, AI678446, AI613038, AI590043, AI469587, AA464646, AI589428, AI590830, AI863382, AI677797, AI621341, AW149076, AI536574, AI538850, AI921254, AI927233, AI568592, AI590423, AW020397, AI583982, AI950892, AL045266, AI335208, AI491775, AI865906, AI612913, AI888208, AI670009, AI433157, AI702073, AI890507, AI682968, AI401697, AI538564, AI445611, AI679266, AI913312, AI686576, AL037454, AI627893, AI586931, AI872545, AL037582, AL037602, AI815232, AI281757, AA766116, AI537677, AI434731, AI635634, AI648454, AI634467, AL036802, AI540674, AL039086, AL036673, AI471282, AW162194, AI582932, AW148423, AI923989, AI583578, AI866770, AL120300, AI890907, AI370623,</p>
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Y16645, L40363, AL049423, AP000247, AL080148, AL049452, A08909, A08913, S68736, A15345, AL122050, AL050278, AC007114, AF067728, E03671, AL049382, AL117460, I66342, Z97214, AF113699, AL096744, AL133565, AF104032, AF091084, X67813, AL049300, A65340, AL137478, S79832, AL078630, AL133067, AL133640, AL137459, AF090903, AF177401, AL133560, U67958, AL080159, AF022363, AL133113, AL110280, U42766, AL049283, AF109906, AL110225, AR034821, X96540, AL136884, AL137530, X89102, AL117416, AL050149, AF061981, M92439, A58524, A58523, E02349, Y09972, A08912, AF090896, AL137294, AL050393, A18777, I89931, Y11254, AJ000937, AL110221, AL117457, AL050116, AL049339, AF158248, AF090901, A03736, AF115410, AR011880, AL133637, X79812, AL050024, Z13966, AF061795, AF151685, AL137533, AL137550, AF061573, AL137292, S76508, S61953, I49625, AF113690, A57389, AL133080, AF087943, AF079763, AL122098, AL133075, E01614, E13364, AL137271, AL137480, AF102578, AF026816, AL050277, A08908, AF118070, U58996, Z82022, AF100931, Y10823, AL137557, D89079, AJ238278, E07108, AF090900, I32738, AL133665, U88966, AP000130, I89944, AR020905, AF113694, AF113677, S63521, AF118064, AL049938, I33392, AF183393, AL080162, AL023657, AL117394, AL080126, AL133619, A21103, X82434, S36676, A93350, Y14314, AF057300, AF057299, AC006112, I89934, AF090934, Y11587, AF106827, X84990, AF081197, AF081195, AF118094, AL133016, AL050155, U35846, AL137479, AL080124, U75932, AB019565, S75997, AF113019, AL110196, AF107847, X70685, AF115392, AF125948, AF125949, A45787, AL080140, AL050146, AL133031, U78525, AF079765, AF106862, X98834, D83032, AF126247, AF082526, A76335				
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1706	HE8FB89	877012	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1428 of SEQ ID NO:1706, b is an integer of 15 to 1442, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1706, and where b is greater than or equal to a + 14.</p>	<p>AI797081, AI669186, AI922708, AI400881, AA156853, AA062971, AW027338, AA431360, AI091639, AI627975, AI358574, AI202381, AA255522, AW086138, AA890259, AA806628, AA255565, AI367251, AA088310, AA765366, D63210, AI796381, H48099, H48098, AA720634, AL079437, AI758780, AI911927, AW022560, AA256707, AA737329, AA255588, AA877667, AA455364, AA813874</p>
1707	HCRND67	877013	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 794 of SEQ ID NO:1707, b is an integer of 15 to 808, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1707, and where b is greater than or equal to a + 14.</p>	<p>AA648907, AW001743, N40531, AI978754, AI446119, AI949312, AA252030, AA521447, AW024768, AI039260, AI962419, AI935656, AI416968, AI361764, AA860961, AI127900, AI936802, AI761487, AI580311, AI917267, AW024010, AI189597, AI864624, AA131263, AI351462, AI422420, AA904280, AI636058, AA931114, AA648498, AI767707, AW262532, AA191430, AI312828, AA860568, N46577, AA804488, AI680207, AA628794, N45139, AI694810, AA574232, AI522273, AI362932, N46583, AA364681, H91961, N40538, W22178, H99173, W22807, AA829581, AL046944, R79750, AC005325</p>
1708	HSPA101	877014	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1041 of SEQ ID NO:1708, b is an integer of 15 to 1055, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1708, and where b is greater</p>	<p>AI378753, N35689, AW207088, AW151846, W49562, AI457284, N35406, W49563, AA334557, R58493, H24416, AI678442, AI791556, AA242954, R30676, AW022665, R47185, AL031652, L41349, L13935, L13936, L13937, L13938, AL117633, L15556, L18962, AF027571, AF031370, U57836</p>

1709	HOSXA83	877015	<p>than or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 1030 of SEQ ID NO:1709, <math>b</math> is an integer of 15 to 1044, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:1709, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	AA100220, AI167817, AA113216, AA324768, AA085997, AA149087, AI493421, AA629345, AA625949, AA149086, AA669959, AA431870, AI866312, Z28464, AA172371, AW173386, AI183937, AA431871, AA262957, AL036908, AI271960, AA085643
1710	HAVTF85	877018	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 881 of SEQ ID NO:1710, <math>b</math> is an integer of 15 to 895, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:1710, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	AL037339, AA811927, AI720889, AA926797, AL039480, AA442561, AA858311, AI566218, AA846839, AI583216, AI635043, AA699924, AI192601, W69310, AI262270, AA526986, AI304664, AI310345, W69206, AI147372, AA973817, AI431515, AI818856, AI033497, AA983644, AW129307, AA701244, AA926804, AA630163, AI289870, AI061307, AA554361, AI566853, AI262295, AA031671, AI092076, AI280857, W73760, AW074354, AI924486, AI367351, AA304674, N75814, AA678529, AA130266, AA808417, W68377, N50405, AA831659, AA907418, N50457, T89689, N75514, AI244342, AI445788, AA365398, R55802, AA853796, AI632051, AA291486, R28626, W68336, H29812, R52537, R42369, H02369, F02630, AI686839, AA188995, F03753, AW236685, F04385, W73593, AA728837, C02595, AA653337, AA883260, R43407, T29673, AI471055, AA190445, AI567050, AA031670, AI246665, AI658622, R33489, AI932403, AL041862, AI452556, AI923989, AW188793, AL042745, AW071349, AL046356, AI554245, AL119748, AL079977, AI815232, AL046926, AL040243, AI434223, AL047675, AI866573, AL042628,

	AI933785, AI433976, AL045500, AI433157, AL042744, AW151136, AL047092, AI539771, AI500523, AI538716, AI537677, AI500659, AI554821, AI801325, AI582932, AI284517, AI500706, AI445237, AI491776, AW151138, AI521560, AI889189, AI500662, AI284509, AI889168, AI633493, AI434256, AI888661, AI284513, AI569579, AI888118, AI440252, AW129106, AL042787, AL045266, AL042551, AI432666, AW150578, AI800453, AW132001, AW071417, AI620284, AI800433, AL042627, AI866510, AL045620, AI826225, AI805769, AI275175, AW020693, AI537515, AW301505, AL049085, AI499463, AI610362, AI491852, AI889148, AI889147, AI432656, AI812015, AW082113, AI440239, AL042538, AI627893, AI538342, AL045891, AL045774, AI269862, AW196105, AI251221, AW268122, AI436429, AI537273, AI436456, AW081255, AW080379, AI963846, AI520702, AI567940, AI817244, AL039276, AI612913, AI805385, AI811785, AI494201, AI285826, AI863014, AI521594, AI499512, AI815855, AI636372, AI889133, AW005858, AI630252, AI567993, AL047422, AW088899, AI133559, AL045163, AL037454, AI344928, N80094, AI610429, AW162071, AI539632, AI564765, AI610402, AI539847, AL079963, AI567935, AI349772, AI364788, AL041150, AI698401, AW079572, AW161579, AI539028, AL036638, AA225339, AW083804, AI049851, AW169671, AI686906, AI866608, AI537617, AL036736, AI284131, AL036802, AI783504, AW190042, AI648663, AL121286, AW073994, AI889953, AI345608, AL048377, AI680162, AI862144, AL040097, AI567360, AA572758, AW088134, AI539153, AI698391, AI612885,

	AI539238, I48979, AL110225, AL122049, I48978, AL122098, I89947, AL133072, AL117460, U42766, AL133016, AI2297, AL137271, A08916, AL122050, A08913, A08910, A08909, AF078844, I33392, AF111851, AL110221, AF118064, AL050024, AF067728, AL049283, AL133080, I89931, AL050277, AF017152, S68736, AF146568, AL050138, I49625, AF177401, I03321, AL049430, AL117585, AF090896, AL122093, AL122110, Y11587, AF113689, AL137557, AL137560, AF113013, AL122123, AF113694, AL133560, AB019565, U91329, Y11254, AL133640, AL117457, AL133077, AL080124, AL133606, AF113677, AL137550, AL137459, E07108, AL050108, X82434, E03348, AL049938, U80742, Y16645, AJ000937, AL049314, S78214, AL133075, AL096744, AL117435, AL133565, AF079765, U00763, E07361, AF113690, AF090943, AF118070, AF113699, AL137648, AF113691, AL133557, AL050116, AF125949, AL137527, AF106862, X98834, AF113019, A93016, AF090934, AF158248, AL122121, AF091084, AL117583, AF183393, AL133568, AL117394, AL133113, I26207, U35846, AF118094, X84990, AL080127, AL050393, X63574, AJ012755, X96540, AL133104, AF097996, AF090903, AF113676, AF090901, U72620, AL080060, X72889, AL133093, AJ242859, AR059958, AL137538, AJ238278, I00734, AF125948, AL080137, AF104032, AL049466, AF017437, AL049452, AL110196, A77033, A77035, X70685, E02349, E15569, A93350, AF090900, E00617, E00717, E00778, AL050146, AL137463, A65341, AF087943, AL049382, I42402, Z82022, AF026124, AL133014, X65873, A03736, AL137521, A58524, A58523, AL050149, AF111112, AR011880, I09360, AL050172, AL049464, L31396, L31397, AF061943, X93495, A08912, AL137476, AL049300, U67958, AF119337, AL137283, AL080159, AL110197,

1711	HTEPJ45	877019	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1600 of SEQ ID NO:1711, b is an integer of 15 to 1614, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1711, and where b is greater than or equal to a + 14.</p>	AL137533, IO9499, AF026816, AR038969, AL137526, AR000496, U39656, L13616, E08263, E08264, S61953, A90832, Y09972, U49908, AF003737, E04233, Y14314, AL110280, AL137556, AF153205, AF185576, AL137523, A07647, AF057300, AF008439, AF057299, A45787, AL080148, AJ006417, AR038854, AL133067, U58996, E02221, AL137480, Z72491, AL080074, X53587, E05822, AL133098, AF079763, E08631, AF061573, AF162270, L30117, M30514, AL117440, AL137273, Y07905, AL137292, AL137478, I17767, U96683, X83508, AL023657, AF111849, U68387, AR013797, X87582, AF106827, AL137294, AL133049, AL117432, I41145, X62580, AL133081, L05186, E12747, AL050092, AL110222, AR020905, AF132676, AF061836, X52128, U78525, AL137488 AW135340, AI908516, AW003833, AI692953, AI693316, AW242982, AI194008, AI672260, AI497695, AW242975, N63914, AW242988, AI341520, AI972371, AI373504, AA705554, AI6333950, AI276537, AA699365, AI989919, AW204605, H11413, W00441, AA279329, AI656862, AI961706, AA455604, F28946, AI678125, W20411, N98286, H08430, AA455968, W32633, AA528280, AI702940, H85245, T95059, H08429, F13395, T81953, F37163, AA215977, AA301556, T95155, F11101, T77655, H11389, AA279895, AW196491, AI915713, N80005, AA806720, AI802542, AI624279, AW198090, AI584140, AI890223, AI612913, AI648509, AI439717, AI572676, AI702406, AI497733, AW104724, AI886124, AL121328, AI254731, AI224027, AW087445, AW168795, AI934011, AI539687, AI537677, AW262565, AI569616, AI801766, AI610402, AW071349, AI811344, AI520785, AI680498, AI591316, AI554818, AI468872, AA225339, AI269205, AI566670, AI824746, AL079963, AI433976, AI269862,
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AL042628, AI636588, AI619502, AW129659, AI554427, AW132056, AI567846, AI440239, AL119863, AL040243, AI491852, AI539771, AI500077, AI637584, AI364788, AI249257, AI559296, AI859511, AI873604, AI701074, AI890833, AI926790, AW170635, AI564719, AL045266, AL134830, AI677796, AW130776, AI569583, AW026882, AI538085, AW149311, AI433157, AI702073, AI284484, AI273048, AI934036, AI679990, AI868831, AI950664, AI475371, AI571909, AI247193, AI498067, AI280747, AW023590, AW088903, AI633419, AI280751, AI540832, AL045500, AL041150, AW193000, AI587143, AI270055, AW090013, AI627360, AI318280, AI633125, AW150578, AI673785, AI439745, AI536638, AI590120, AI274508, AW302988, AI863014, AL036361, AI275175, AW051258, AI282504, AI362637, AI537024, AI610362, AI274013, AI590118, AI815855, AL046944, AI648663, AI620284, AI568296, AI281837, AI475451, AW081036, AI922901, AL043981, AI434223, AI097248, AI702068, AI269696, AW301409, AI866608, AI254042, AI284517, AI475394, AI862139, AI687362, AI917055, AI500659, AI539808, AW169653, AI476109, AL047763, AI590021, AI801325, AI500523, AA807352, AI624206, AL121270, AI270707, AA470491, AI857296, AI500706, AL039276, AW169671, AI801152, AI536685, AI491776, AI445237, AI349004, AW151138, AI696612, AI828731, AI570989, AI500662, AW274192, AI564247, AL110402, AI499285, AL041573, AI889376, AI784252, AW268220, AL043326, AI524671, AW008048, AI921248, AI554344, AI955917, AI570909, AI648454, AI572787, AI445025, AI433037,				
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	AL121463, AI884469, AI648684, AI612759, AI560099, AI064830, AA835801, AL043975, AI469532, AI500146, AI680165, AI573032, AI872711, AW148716, AF013168, D87683, AC002096, I89947, Y16645, AL122050, AL137550, I48979, AL133557, I48978, AL110221, AF090943, AF017437, AF111851, AL050393, AL117460, AL117435, AF090934, A08916, AL122123, Y11254, AL137459, X84990, A08913, AL049382, AF090900, AF090903, AF118070, AL133075, AF113677, AL080124, AF158248, AF113019, A65341, S68736, AL137527, I89931, AL117457, I49625, AL050138, AF113694, U42766, AF113690, AL133080, AL117585, AL050149, AF090901, A77033, A77035, AL049452, AL122093, X82434, AL137557, AL050116, AF146568, AF104032, S78214, AL110196, AJ000937, AF079765, AL049314, AF017152, AL096744, AL133016, AF078844, AL133606, E07361, AL133640, E02349, AF113676, AL080137, Z82022, AF125949, AF090896, X63574, Y11587, AF113013, L31396, L31397, AF091084, AF106862, AL050277, A08910, AF177401, AL122121, E03348, AF183393, AF125948, AL050108, AF118064, AF113691, AL049466, A93016, AL133560, AJ238278, AL050146, AL110225, AL137283, AF113699, AL117394, AL080060, AB019565, AL133565, AL049464, AF113689, AL133093, AR059958, AR011880, AJ242859, AL049300, AF097996, E07108, AL049938, AL117583, U91329, AF118094, X93495, A58524, A58523, I33392, A08909, AL122098, AL133113, AL050024, AL049430, AL122110, U00763, AL137271, AL137538, X70685, AL137648, I03321, X72889, AL137463, A08912, AL080127, A12297, U35846, AJ012755, U80742, AF000145, X96540, U72620, A03736, X65873, AF061943, AF067728, AF119337, AL049283, AL080159, AL133014, X98834, AF087943, AL133568, AL133072, AF111112.

1712	HOSBX95	877020	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 516 of SEQ ID NO:1712, b is an integer of 15 to 530, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1712, and where b is greater than or equal to a + 14.</p>	<p>AL122049, AL137521, I09360, AR000496, U39656, I42402, E08263, E08264, AL122111, AL133067, U67958, AL110197, E15569, A93350, AL137533, AL137523, AF057300, AF057299, AF026124, AF153205, U58996, AF079763, AL133077, E05822, AL137560, AL137480, AR013797, Y09972, AF026816, I26207, AL050172, S61953, AL137556, AL137526, I00734, E00617, E00717, E00778, U68387, E02221, I66342, A08911, Z37987, AC006371, Y14314, AR038969, A07647, AL110280, AL137429, AL080074, Z72491, AL137292, AL137476, Y10655, AF003737, U78525, AL080148, U96683, AL133104, AF100931, E06743, AF106827, AF159615, AF185576, X87582, I17767, A45787, AF061981, AL133558, AF111849, AL137488, AF162270, E08631, AL122118, Y07905, AF061573, AL133665, M30514, AL117440, AR038854, AC005992, AL122045, AF095901, AJ006417, E04233, AF118090, AL133098, AF081197, AR054984, AL133081, I09499, AL110222, L30117 AW393918, N56766</p>
1713	HSIFP30	877022	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a</p>	<p>AI678780, T98311, R10554, AF209389</p>

1714	HE9HL05	877023	<p>is any integer between 1 to 714 of SEQ ID NO:1713, b is an integer of 15 to 728, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1713, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1581 of SEQ ID NO:1714, b is an integer of 15 to 1595, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1714, and where b is greater than or equal to a + 14.</p>	<p>AI114634, AI310154, N48237, AI040784, R96774, R91077, AA333785, AA334375, T82801, AA678184, T95816, AI678780, T96750, R91078, AA344220, R09895, T74622, T68354, N49552, AA332963, AI023306, T71511, T95519, R92515, T60367, AI791396, AW172723, AI815239, AI362332, AI249946, AA665587, AW078729, AI805769, AW265004, H42825, AI669639, AI608802, AW074274, AI702540, AI499104, AI758816, AW263799, AI886163, AI476147, AI677797, AW026633, AI816956, AI677647, AI911645, AI961622, AI250175, AA614660, AI244380, AI446124, AI492528, AI869750, AI921609, AI699154, AI270039, AI040725, AA810969, AW189003, AW087898, AI446564, AI419311, AI612723, AI627390, AI364220, AI572418, AW410769, AI628855, AI446110, AI872810, AI471424, AW150505, AI570195, AW150351, AW118457, AI694855, AI419417, AI369029, AI474427, AI568870, AW079656, AA088789, AI521128, AW168031, AI660848, AA910956, AI701948, AI589433, AI805385, AI591381, AI333552, AW263697, AI679622, AI683465, AI610645, AI952302, AI625231, AI696626, AI890714, AI347569, AI671638, AI560514, AW193020, AF209389, J04813, M18907, X12387, M14096, E02555, D31921, D00408, E02532, J04449, S53047, X90579, M13785, AF182273, L26985, X54915, U59378, AF109068, Y10214, M73992, Y11995,</p>
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1715	HWLMB91	877024	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 577 of SEQ ID NO:1715, b is an integer of 15 to 591, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1715, and where b is greater than or equal to a + 14.</p>	<p>AF204959, AF185589, D11131, S74699, S74700, L35912, I12087, AF067420, A94751, U77594, AL137561, AC004455, AF109906, U92068, A69673, A69681, U89906, AF106934, AF059612, AL133645, AR068182, AL137659, AC005284, AC007370</p> <p>AI188270, AI742085, AI167453, AW204725, R53616, R48325, AA347732, AW341017, AA579588, F35057, AA768452</p>
1716	HOVEE11	877025	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1960 of SEQ ID NO:1716, b is an integer of 15 to 1974, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1716, and where b is greater than or equal to a + 14.</p>	<p>AI762892, AI760766, AI174624, AW081757, AI824008, W94214, AI189223, AA447177, AI927354, AA443809, AI307319, AI299589, AI372949, N30895, W81043, AI934550, AA605197, AW390982, AI168782, W81079, N56763, AW374587, W72920, AI538814, AW079505, AW137328, AA629096, AI699821, AI767317</p>
1717	HCYBN69	877026	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 545 of SEQ ID NO:1717, b is an integer of</p>	<p>AA127756, AA769607, AA305740, AW403303, AA361909, D81026, D81030, C14389, D80522, C15076, D80133, D80166, D80193, D80212, D59502, D80195, D80022, D80164, AW377671, D80391, C14331, D59787, D59619, D80038, D80210, D80196, D58283, D80269, D80240, D59467, D59275, D59859, D80227, D59927, D80219, D51423, D51799, D80253,</p>

<p>15 to 559, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1717, and where b is greater than or equal to a + 14.</p>	<p>D80366, D80043, D57483, D80188, D50979, D80045, D80248, D80378, D59889, D80024, D80258, AA305409, D59610, D50995, C14429, D59627, D80251, D80241, D80268, AA305578, D51060, D59373, D51022, C06015, AA514188, C75259, AW177440, D80014, D80439, D80302, C14014, AW360811, AW178893, AA514186, D80247, T03269, D80132, AW375405, T02974, D80157, AW179328, D51213, D59503, AW178983, AW378532, AW366296, C14227, C14077, AW360844, D58101, AW360817, AW375406, AW377676, D51103, AW378534, AW179332, AW377672, AW177501, AW179023, C05695, AW178905, AW177511, AW137066, AW178906, D80064, D81111, AW178762, D80134, D51250, D51759, AW176467, AW352171, AW352170, D58253, AW360834, AW177731, AW178775, AW178907, AW378528, AW179019, AW179024, AW369651, AW367967, AW352158, AW177505, AW360841, AW352117, A1243347, AW179020, A1239543, AW178909, AW177456, AW179329, AW178980, AW178914, AW177733, AW178908, AW178754, AW179018, F13647, T48593, C14407, D59653, AW179004, AW179012, AW178774, AW378525, AW352163, A1910186, AW352120, AW352174, AA805151, C14298, D45260, D80168, AW179009, A1905856, AW178911, AW378543, AW177722, AW177728, C03092, D58246, AW378540, AW378539, AW367950, A1557751, A1525923, AA809122, H67854, T11417, H67866, AW178781, AW177508, A1557774, T03116, D59695, D59317, D80949, A1525917, Z21582, A1535850, AW178986, AW177497, D45273, D52291, AW177723, C14344, A1535686, D59474, AW179011, D59551, C14973, AA514184, AW378533, AA285331, D51221, T03048, A1525920, AW177734, D60010, D60214, A1525227, D51097, D51079, C14957, C14046, A1525925, A1525242, A1525235, A1525222, A1525912,</p>
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1718	HWLWN2 4	877027	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 820 of SEQ ID NO:1718, b is an integer of 15 to 834, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1718, and where b is greater than or equal to a + 14.</p>	<p>AI525215, AW378542, C13958, C16955, C05763, Z33452, AC005035, AB013385, AL137755, AF096300, AB014587, U88984, A84916, AR018138, AJ132110, A62300, A62298, AF058696, AB028859, AR008278, A82595, A67220, AR060385, AB002449, X67155, Y17188, D26022, A25909, Y12724, D89785, A78862, D34614, A94995, D88547, AR008443, I50126, I50132, I50128, I50133, I82448, X82626, AR016808, AR066488, AR016514, AR060138, A45456, I14842, A26615, AR052274, AR038669, AR025207, Y09669, A43192, A43190, AR066487, A30438, AR054175, D50010, AR066490, Y17187, I18367, A63261, AR008277, AR008281, AR008408, AR062872, A70867, AR016691, AR016690, U46128, AB012117, D13509, X68127, I79511, A64136, A68321, AR060133, A85396, D88507, AR066482, A44171, A85477, I19525, A86792, X93549, U79457, AF123263, X72378, AR032065, AR008382</p> <p>AI301935, AI760340, AI921888, N30193, AA748734, AI743279, AI284147, AA648777, AW304324, AI916877, AA732729, AA971316, AI218098, AA93916, AA504339, R66801, AA648769, R67901, N40188, R27573, R27672, AI802542, AW403717, AI440239, AI919345, AI612913, AI619502, AI564719, AL048656, AL040243, AW026882, AI433157, AL047763, AI270055, AI499393, AI249497, AI445025, AL045500, AI475371, AI811344, AI539771, AI635942, AI912288, AI934011, AI560099, AW104724, AW071417, AW129659, AI805638, AI521012, AI702433, AW103371, AL119863, AI889376, AI648663, AI868831, AI569583, AW169653, AW150578, AL047042, AI884469, AI637584, AI499131, AI625079, AW082040, AL119791, AI497733, AI635461, AI318280, AI445432, AI340627, AI536685, AI587114, AL043293, AI954183,</p>
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AI687728, AW302988, AI815855, AI524671, AI590021, AI207510, AI539780, AI610645, AI620284, AI818683, AI273142, AW169671, AI687127, AW301409, AI573032, AI687362, AW090013, AI866608, AL036361, AI682971, AI633419, AI921248, AI469532, AI498579, AI866002, AI433976, AI828731, AW166970, AI580190, AI432969, AW102785, AI612759, AL049085, AI696398, AI571909, AI677796, AI799470, AI909697, AL045163, AI636719, AI539153, AA640779, AW238730, AI439745, AI471712, AL121463, AA572758, AI702073, AL036802, AI926790, AI591316, AI952360, AW268220, AI654750, AW020693, AI340603, AI697137, AI537677, AI922901, AI349004, AI312428, AW075667, AI815232, AI269696, AI888501, AI812107, AI800453, AI340582, AI800433, Z99428, AI888953, AI567128, AW075413, AI570781, AI567993, AI349645, AW074869, AI590120, AW149227, AL036274, AI345131, AW087534, AI309401, AW103893, AI561299, AL036403, AW148408, AI343112, AL121014, AI284517, AW071349, AI207572, AL121270, AW301300, AI349598, AL036664, AW075207, AI636456, AI648684, AW151136, AI345735, AI554427, AL036396, AI536638, AI349933, AI250293, AI524526, AL047041, AL038565, AL036980, AI445165, AI348897, AA427700, AW148716, AI702406, AI174394, AL041573, AI313320, AL038605, AI610690, AI500077, AW302992, AW089572, AI609594, AI862144, AI312146, AI312339, AI284131, AI269862, AI366549, AW086113, AI869367, AI520785, AI887396, AI610307, AW268251, AW268253, AI887659, AL036146, AW301505, AI753683, AA835801, AL045266, AL079963, AI434281,				
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				AI636585, AI439762, AL036631, AI538716, AI934035, AI799199, AI537303, AI800185, AL041772, AI783504, AL036214, AW149311, AW148320, AW087445, AA470491, AI828682, AI349772, AI224992, AW088903, AA225339, AI909641, AI281773, AL041150, AI690312, AW022682, AI567351, AW074993, AW302965, AI784252, AC006313, I48979, I89947, S68736, AF125948, AF104032, AF090934, U42766, AC006222, AL133640, AF017152, AF090903, AL117457, A08916, AL050149, AF090943, AL117460, AF090901, AF090900, AL050116, I48978, X84990, AL133606, AF118070, AF113013, S78214, A08913, I89931, AL137459, AL122093, AL050277, Z82250, AF078844, AL110221, Y16645, AF118064, AL122050, AF177401, AF113694, AL049452, AL133557, AF113690, AF113019, AF113677, Y11587, AL080137, AL122123, AF113699, AL133016, E03348, AF113689, AL049430, AR059958, AF158248, AF146568, AC006482, AL122121, AL137557, I49625, AL133075, Y11254, AL050108, AL110196, AL049314, AJ000937, AL133080, AF125949, AL050393, AL133565, X63574, AF106862, AL080060, A08910, A93016, AL049938, AL050024, E04233, X70685, AF113691, AL096744, AL133560, AL050146, AL137527, AR011880, AL137283, AJ242859, AL080124, AF090896, AL049382, AF111851, AF113676, AL117394, AB019565, AL049466, AL133093, A65341, AJ238278, U00763, AF091084, I03321, AF097996, AL049464, A08909, X96540, AC006501, L31396, AL110225, L31397, AL122110, AL117583, X72889, E07361, X82434, AL117585, AL133113, X65873, AL137521, AF017437, AL137550, AL050138, AL117435, AF079765, U91329, A58524, A58523, AL049283, E07108, AF087943, E02349
1719	HOSOZ37	877029	Preferably excluded from the	AA452295, AI700341, AA039713, AW274555,



			<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 792 of SEQ ID NO:1719, b is an integer of 15 to 806, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1719, and where b is greater than or equal to a + 14.</p>	<p>AW118151, AI684403, AI040232, AI435785, AW023346, AA039712, AI932286, AI089086, AW021748, AA582100, AW020316, AW300014, AA886794, AI492312, AI492311, AL034350</p>
1720	HCROD37	877030	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 491 of SEQ ID NO:1720, b is an integer of 15 to 505, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1720, and where b is greater than or equal to a + 14.</p>	
1721	H21.AF20	877031	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 665 of SEQ ID NO:1721, b is an integer of 15 to 679, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1721, and where b is greater than or equal to a + 14.</p>	<p>AI474074, AA313945, AW382674, AI475856, D81026, D80522, D80166, D59619, D80210, D80240, D80133, C14389, D81030, D80219, D51423, AA305409, D80195, D80212, D59859, AW377671, D51799, D80253, D80164, D80251, D58283, D80022, D80248, D50979, D80193, D80188, C14331, D80391, D59787, D59502, D59467, D59275, D80043, D80227, D59610, D57483, D80366, D80196, D59889, C15076, D80024, D80038, D59927, AA305578, D51060, D80269, D51022, D50995, AA514186, D80241, D80045, D80378, AW177440, C14014, AA514188, C14429, AW178893, AW360811, D59373, T03269, T11417, C75259, AW179328, C14077, AW375405, C05695,</p>

	D80132, AW378532, D80268, AW366296, AW360844, AW360817, AW177501, AW375406, AW177511, D80439, AW378534, D80302, AW179332, AW377672, AW179023, AW178905, D80134, AW178762, D58253, D51250, AW178980, AW178775, AW352171, AW377676, AW352170, AW177731, D80247, AW178907, AW369651, AW179019, AW179024, D59627, D80258, AW352158, AW177505, AW352117, AW178906, AW176467, AW179020, AW360841, C06015, AW178909, AW177456, AW179329, AI910186, AW177733, AW378528, AW178908, AW178754, AW179018, AW352174, F13647, D80157, AW179004, D58246, D58101, AW179012, AI738909, AW178914, D80014, AW378525, D51103, AW367967, D51759, D51213, AW378543, D59503, AW177728, AI905856, AW179009, AW178774, AW178911, AW177722, AW352163, D80064, D59653, Z21582, AW360834, AW178983, D81111, AW178781, T48593, AW378540, D45260, C14227, AW177723, AW352120, T02974, C14975, H67854, H67866, AI535850, AA285331, AW378533, AW367950, D51097, C14298, C03092, AA809122, AW177508, AI525923, C14407, T03116, D51221, AI525917, D80228, AW178986, AW177497, D59317, AI557774, D59474, D45273, C14973, AW177734, AI557751, AI525920, C14344, D50981, AA514184, AI525215, AW378539, AW270229, D60010, C14957, D80168, AI535686, AI525235, D59551, D60214, AI525227, C14046, D80949, AI525912, T03048, D59695, AI525222, AI525242, D52291, AW378542, AI525925, D51079, D51053, C16955, AI535961, C05763, Z33452, H67858, Z30160, AF067806, AF056490, AR008278, A62298, AR018138, A84916, A62300, AJ132110, AF058696, AB028859, X67155, Y17188, D26022, A25909, Y12724, A67220, D89785, A78862, D34614, A82595, D88547, AR060385, A94995, X82626, AR008443, AB002449, AR025207, I50126, I50132,

1722	HCRODI5	877032	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 605 of SEQ ID NO:1722, b is an integer of 15 to 619, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1722, and where b is greater than or equal to a + 14.</p>	<p>I50128, I50133, AR066488, AR016514, AR060138, A45456, A26615, AR052274, Y09669, A43192, A43190, AR038669, AR066490, A30438, AR066487, AR016691, AR016690, U46128, AB012117, I18367, I14842, AR054175, D50010, Y17187, X68127, AR008277, AR008281, A63261, A85396, D88507, AR066482, A44171, A85477, AR008408, I19525, A86792, AR062872, A70867, X93549, D13509, A64136, A68321, AR060133, I79511, U79457, AF123263, AR032065, AR008382</p>
1723	HS2SG18	877034	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 838 of SEQ ID NO:1723, b is an integer of 15 to 852, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1723, and where b is greater than or equal to a + 14.</p>	<p>AA307890</p>
1724	HMCHW1 2	877037	<p>Preferably excluded from the present invention are one or more</p>	<p>AA633529, AA307645, AL137945, R78416, AA143592, AA699829, AA130430, R23973, AA204937, T58303,</p>

				<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 683 of SEQ ID NO:1724, b is an integer of 15 to 697, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1724, and where b is greater than or equal to a + 14.</p>	<p>AA205080, AI581369, AA130456, H03662, R77222, C05254, H75671, H70965, AA134504, AI733734, AA133084, AI733757, AA088546, AA553526, AA843823, AW392930, AI522161, AA055592, R66492, R31147, AI820789, AI732411, T92637, H39731, W38856, AI499378, AA151971, AI940502, AA085899, AA224498, AA479719, AA100721, AP000365, M27826, AL050348, AL035419, AC005276, AL121782, AL080316, AC007617, AC010168, AC008069, AC000064, AC002984, AB020874, AC007401, AC007566, AC005150, AC005145, AC007022, AL035067, AC000114, AC007685, AC005549, AC007207, AC006146, AL031767, AC008072, AC002530, AF130342, AL035408, AC002066, AC007681, AC008134, Z92543, AJ133269, AC005386, AL049546, AC004998, D11078, AC004986, AL035698, AC006502, AL031256, AC004823, AC007876, AC005090, AC004514, AC005837, AC003013, AL009031, AC007463, AC009946, AC006364, AC007250, AC005410, AC004875, AL109620, M18048, Z82210, AL139054, AL022068, AL121718, AC007381, AL049872, AF118808, AC005699, AL031671, AL023877, AC005036, AL009050, AC003009, AL034409, AC004925, AC007870, AC004768, AC004456, AL133224, AF146191, AF212831, AC005307, AF053936, Z71183, AC012380, AC007486, AC007537, AC004072, AL133321, AC003078, AC007450, AB020871, AL021327, U80460, AC008062, AC007106, AL021940, AF070717, AL024495, AC004103, AC005234, AC004025, AC004817, Z78021, AF049895, AC006382, Z95327, AL031073, AL117327, AC005392, AC007001, AL035610, AC002384, U95626, AC007785, Z99495, AL109809, AF149773, AF068862, AC005102, AC005154, AL050339, AC004835, AL034452, AC005531, AC005576, AC004915, AL109967, AC004617, AP000230, AP000144,</p>
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1725	HWLVSS2	877043	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 454 of SEQ ID NO:1725, b is an integer of 15 to 468, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1725, and where b is greater than or equal to a + 14.</p>	<p>AL022318, AC004858, AC007276, AF109907, AC004510, AC011604, AC005723, AL079352, AC002326, AL132987, AF011889, AL049544, AP000013, AP000155, AL050325, AC007182, AL035690, AC006582, AC004924, AC007447, Z76735, AC006459, D87055, AC004472, AP000501, AC005002, AF205592, AC005686, AL133371, AF026248, AF026254, AF026249, AL022330, AC004032, AF108842, AF110315, AF108841, AF108843, AC007280, Z83818, AL034350, D10083, AC003007, AC005632, AF064074, AF064073, AC007556, AC004889</p>
1726	HCRPG56	877044	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 468 of SEQ ID NO:1726, b is an integer of 15 to 482, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1726, and where b is greater than or equal to a + 14.</p>	<p>N23653, AI608674, AC006432, AC009533, AC008013</p>
1727	HTAHC75	877046	<p>Preferably excluded from the</p>	<p>AI916318, AI698170, AI346506, AA481006,</p>

1728	HCRPH26	877047	<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1883 of SEQ ID NO:1727, b is an integer of 15 to 1897, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1727, and where b is greater than or equal to a + 14.</p>	<p>AW006462, AI808371, AI492123, AI860659, AW083792, AI298294, AI377296, AI299866, AI143985, AI832385, T66213, AA315944, AA774467, AA481745, AA745359, N78840, AA744416, AA035644, AW236811, AI693629, AI299645, R54532, AA987358, AA745453, AW136153, AI889513, AI917565, H28998, AI459849, R55684, R99148, AA975345, R45317, H08045, AA992883, AI122963, AA987223, H18288, AI681364, R55685, F09827, H46943, AW418590, R88200, AI745480, H48447, AA744390, Z45158, AW192055, AA972155, R14680, F04052, AA827984, F12197, H26802, T29943, AA295772, R38093, AI290682, AL047550, T07816, AA355247, H07939, H69808, R38173, T85773, R54435, AA508768, AI382544, R20497, AI984917, AW294367, AA090326, H51338, F11088, AA916514, T77104, R42403, N84369, T66146, AI910252, AI127423, AW131840, AA702500, AA300937, AF007155, AA508781 AF118076</p>
1729	HWLWL67	877049	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 509 of SEQ ID NO:1728, b is an integer of 15 to 523, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1728, and where b is greater than or equal to a + 14.</p>	<p>AI375746, AI620255, AI739424, AW008095, N64373, AA628778, AI827544, AI246150, AA977500, AA779757, AI216037, AA724806, AI143969, AI740635, AA953515, AA938880, AA421570, AA971965, AA010881, AI352432, AA410372, AW082274, AA129683, AI699673, AI807260,</p>

1730	HOSDU39	877050	<p>SEQ ID NO:1729, b is an integer of 15 to 218, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1729, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 566 of SEQ ID NO:1730, b is an integer of 15 to 580, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1730, and where b is greater than or equal to a + 14.</p>	<p>AI375466, AI633645, AA588195, AA670218, AA487274, N64317, AW118102, AA449233, AL133312</p>
1731	HCROS68	877051	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 623 of SEQ ID NO:1731, b is an integer of 15 to 637, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1731, and where b is greater than or equal to a + 14.</p>	<p>AI940522, AC007688</p>
1732	HWLRT47	877052	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 409 of</p>	<p>AA676521</p>

1733	HCRPN44	877056	<p>SEQ ID NO:1732, b is an integer of 15 to 423, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1732, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1267 of SEQ ID NO:1733, b is an integer of 15 to 1281, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1733, and where b is greater than or equal to a + 14.</p>	<p>AI814630, AI659745, AI337185, AI476215, AW014950, W90223, AI683180, AI040605, AI052156, AW419172, N20981, N92247, AI583402, N51526, H64280, H64281, H21597, AW117231, W37142, W47567, H65040, Z40718, H65039, W86558, W90127, W47547, AI572195, W86559, R08722, R08628, M79050, R16990, AA002167, AC005736, AB011092, AC007151, T87129, T99488, R87793, H50980, H66212, H66857, N30250, W15238, W15419, AA024406, AA076483, AA099706, AA513421, AA535580, AA593084, AA593075, AA639881, AA766869, AA809957, AA828815, AA922533, AA705190, AA775052, AA854917, AI085171, AA952891, AA952941, AI307637, AI348056, AI203039, AI380800, AI473584, AI571026, AI424140, AI219098, AI659256, AI636785, AI338942, AI167356, AL049670, AL021397</p>
1734	HCRPD33	877057	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 261 of SEQ ID NO:1734, b is an integer of 15 to 275, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1734, and where b is greater than or equal to a + 14.</p>	
1735	HCRPE57	877058	<p>Preferably excluded from the present invention are one or more</p>	<p>AA989345, AI624083, D61985, N67616</p>



1736	HCRN146	877059	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1017 of SEQ ID NO:1735, b is an integer of 15 to 1031, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1735, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 324 of SEQ ID NO:1736, b is an integer of 15 to 338, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1736, and where b is greater than or equal to a + 14.</p>	<p>AA984838, F12786, AA224052, T75215, T77343, AC005919</p>
1737	HWLRC59	877063	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 412 of SEQ ID NO:1737, b is an integer of 15 to 426, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1737, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more</p>	<p>AA195002, AA194815, AI916670, AW440382, AI884584, AA843585, AI653656, AW130944,</p>
1738	HLHCD08	877065	<p>Preferably excluded from the present invention are one or more</p>	<p>AA195002, AA194815, AI916670, AW440382, AI884584, AA843585, AI653656, AW130944,</p>

			<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 778 of SEQ ID NO:1738, b is an integer of 15 to 792, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1738, and where b is greater than or equal to a + 14.</p>	<p>AW303456, AA456790, AI051183, AW152159, AA130046, R79256, AW439608, H22118, AA134040, T18594, H44350, AI784396, R76637, T79450, T79540, T97240, T97241, R51919, AW079574, C00464, AI699839, AI689564, AL046171, AI702873, R79157, AI905847, AA129873, AA356980, AA351418, T09084, AW248101, AI929724, AI815427, W27745, D85131, M94046, AB017335, M93339, U33819</p>
1739	HWLVE77	877066	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 454 of SEQ ID NO:1739, b is an integer of 15 to 468, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1739, and where b is greater than or equal to a + 14.</p>	N53758
1740	HCROJ64	877067	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 93 of SEQ ID NO:1740, b is an integer of 15 to 107, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1740, and where b is greater than or equal to a + 14.</p>	
1741	HWLQM0 5	877068	<p>Preferably excluded from the present invention are one or more</p>	

1742	HCRPW24	877069	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 471 of SEQ ID NO:1741, b is an integer of 15 to 485, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1741, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 398 of SEQ ID NO:1742, b is an integer of 15 to 412, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1742, and where b is greater than or equal to a + 14.</p>	AC004540	
1743	HOCTA26	877070	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 380 of SEQ ID NO:1743, b is an integer of 15 to 394, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1743, and where b is greater than or equal to a + 14.</p>	<p>AA906013, AW392670, U46347, Z99396, AW363220, AW384394, AW372827, AL119484, AL119457, AL119319, AL119363, AL119497, AL119324, AL119391, AL119355, AL119341, AL119483, AL119443, AL119522, AL043003, U46351, U46349, AL119439, AL119444, U46350, U46341, AL119396, AL119335, AL119496, AL134533, AL134528, AL037205, U46346, AL119418, AL043033, AL042614, AL134153, AL134531, AL042984, AL042965, AL042975, AL119399, AL134538, U46345, AL042450, AL134542, AL042544, AL043019, AL043029, AL042542, AL134132, AL042551, AL043147, AL119304, AL119464, AC015853, AR060234, A81671, AR066494, AB026436, AR054110, AR069079</p>	

1744	HBKDB96	877071	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 939 of SEQ ID NO:1744, b is an integer of 15 to 953, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1744, and where b is greater than or equal to a + 14.</p>	<p>AA812993, AI368842, AI022649, AI084815, AA931328, AI392998, AI287567, AI493596, AI278360, H16208, AW375190, H91009, AW375161, AW375154, AW375158, H90897, H16209, AW375149, AW418706, AW385279</p>
1745	HCRPE30	877073	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 378 of SEQ ID NO:1745, b is an integer of 15 to 392, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1745, and where b is greater than or equal to a + 14.</p>	<p>AB014604, AC003093</p>
1746	HKGAW02	877075	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 519 of SEQ ID NO:1746, b is an integer of 15 to 533, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1746, and where b is greater than or equal to a + 14.</p>	<p>AA935168, AA398801, AL119484, AL134524, AL119418</p>

1747	HCQCD93	877079	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 237 of SEQ ID NO:1747, b is an integer of 15 to 251, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1747, and where b is greater than or equal to a + 14.</p>	AI434772
1748	HOCID62	877080	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 341 of SEQ ID NO:1748, b is an integer of 15 to 355, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1748, and where b is greater than or equal to a + 14.</p>	
1749	HE8PC46	877083	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 818 of SEQ ID NO:1749, b is an integer of 15 to 832, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1749, and where b is greater than or equal to a + 14.</p>	<p>R13359, H08041, AF010245, AW156983, H29189, Z46132, T16980, AI879608, AW402188, AA348764, R34542, R61072, H23510, AA436740, N36381, AI929579, AI879056, AI816318, AL137450</p>

1750	HWLQMS <sub>3</sub>	877087	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 470 of SEQ ID NO:1750, b is an integer of 15 to 484, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1750, and where b is greater than or equal to a + 14.</p>	<p>AW369563, AI674814, AA767616, AA761971, AA465292, AA204693</p>
1751	HTLGE26	877088	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 758 of SEQ ID NO:1751, b is an integer of 15 to 772, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1751, and where b is greater than or equal to a + 14.</p>	<p>AI285916, AI025315, AP000553, AC009516</p>
1752	HCFDE85	877092	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 370 of SEQ ID NO:1752, b is an integer of 15 to 384, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1752, and where b is greater than or equal to a + 14.</p>	

1753	HFEAH85	877093	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 208 of SEQ ID NO:1753, b is an integer of 15 to 222, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1753, and where b is greater than or equal to a + 14.</p>	<p>AI950320, AA340023</p>
1754	HE8QT45	877094	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 636 of SEQ ID NO:1754, b is an integer of 15 to 650, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1754, and where b is greater than or equal to a + 14.</p>	<p>AI052389, AI761986, AW057796, AI656751, AW152082, AI126366, AI125599, AA452171, AI687797, AW023851, AA406351, AI431689, AA778840, AA993437, AI128983, AA565214, AI693581, AI254753, AI285759, AW020705, AI762885, N92604, AI193254, AI003334, C16412, C16192, AA226919, AA479128, AI536542, H08761, AA706764, R85597, T10616, AI933471, AI250282, AW160916, AI440238, AW151132, AI372041, AL040011, AA731417, AA806605, AA641818, AW194014, AA938181, AI932739, AW020164, AI345688, AI813538, AA829402, AI431507, AI890907, AW080157, AI963101, AI279925, AI560198, AW167340, AW151974, AI473536, AI963346, AI244329, N63128, AI350489, AI635634, AA609644, AI627339, AI499057, AI690813, AI581053, AI866469, AI955441, AW021373, AA282824, AI799313, AI609409, AA810226, AI918449, AI699029, AW189548, AW058304, AI828676, AI659041, AI918809, AA065052, AL134828, C21335, AI357644, AI348821, AI590043, AI866770, AI399759, AI636507, AA767924, AA814517, AI289791, AI421662, AW082532, AA761557, AA743474, AA836665, AI628850.</p>

1755	HWLQL84	877095	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 546 of</p>	<p>AI919516, AW088546, AI590755, W48671, AL119863, AL039508, AI241923, AL079963, AI446373, AA934912, AI884574, AL048499, AI865189, AI581033, AW148544, AW079996, AA811736, AI673278, AW078818, AW409793, AI954504, AW002727, AI859991, AI688381, AW406745, AW021717, AW196720, AI915291, AW152182, AI950729, AI472487, AW023072, AI921915, AI582932, AI609191, AI872423, AI619820, AI434731, AI524179, AI800370, AI521560, AI889189, AW075382, N52016, AW089844, AI648494, AI678623, AI273886, AW104141, AW029457, AL022334, AR050959, S75997, AF100931, AF141289, AF183393, AI8777, AL133619, AF039138, AF039137, A08910, A08909, AF103804, AL110269, AB020777, X60769, A08908, X84990, AL137284, U73682, X66113, AR038854, AB031064, E05822, U37359, AL050366, AF000167, A76337, AC005091, AF098162, AF067790, AL137537, AL050155, AR053103, I48978, X55761, AF036941, Y13653, I89947, I33392, AC010077, AF026816, I80062, X83544, I22020, M85164, X99270, AF044323, X66366, AF102578, X01775, AI8788, X80340, AC006288, AL133565, AL137479, A60092, A60094, AF031572, AC004383, S78214, Z49216, X55446, AF068229, AC005992, U76377, I77092, D55641, X87582, AL080227, X99971, AL030998, A65340, AL122116, A77033, A77035, AL122104, AL137271, E03168, AF184965, AF195092, X93328, AL137716, AC005296, A86558, AF038847, AL137554, AF043493, AL110158, AF042090, W79030, AC005486</p>
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			SEQ ID NO:1755, b is an integer of 15 to 560, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1755, and where b is greater than or equal to a + 14.	
1756	HCQCP82	877096	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 275 of SEQ ID NO:1756, b is an integer of 15 to 289, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1756, and where b is greater than or equal to a + 14.	AA193032
1757	HCRMW8 0	877097	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 476 of SEQ ID NO:1757, b is an integer of 15 to 490, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1757, and where b is greater than or equal to a + 14.	AI902587, AL110283
1758	HSIGL73	877098	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 841 of	AW083100, AI206576, H43346, AA095182, H43308, AA248302, AI537677, AI345416, AI345612, AI345415, AL134830, AI802542, AW051258, AL079963, AI677796, AI569583, AI801793, AI619502, AW198090, AI433157, AI702073, AI633125, AI334445, AW163464, AI254727,

			<p>SEQ ID NO:1758, b is an integer of 15 to 855, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1758, and where b is greater than or equal to a + 14.</p>	AA225339, AW071417, AI499285, AI269862, AI863241, AI886753, AI564719, AI521012, AW026882, AL119863, AL036736, AW148716, AW161579, AI340603, AW090071, AI554245, AW160916, AL046200, AI358701, AI611738, AI284131, AI445025, AI536638, AW073865, AI636588, AA640779, AI687362, AI954183, AW300782, AI571909, AI887659, AW300889, AI500077, AW117746, AI921248, AL040243, AI632408, AI627360, AI873644, AI933589, AI682743, AI783504, AI620284, AL039086, AL120307, AI637584, AI919534, AI612885, AI815232, AW163823, AW129659, AI697324, AI284517, AI670009, AL038069, AW169653, AW104724, AI612913, AI801325, AI500523, AI446373, AL037454, AI926790, AI521560, AI500662, AW090013, AW023590, AW104827, AI890833, AI348897, AI491852, AI475371, AI627988, AI520862, AW190194, AL036403, AI567128, AW148363, AI283760, AA427700, AI284484, AL036274, AI699865, AL036631, AI798456, AI524671, AI207510, AW301409, AI812107, AI886124, AL036980, AW150578, AI679504, AI440239, AW080402, AL045500, AW118518, AW075667, AL043293, AI815855, AW148408, AL036396, AI702068, AW020561, AL038605, AI866770, AI559296, AA572758, AL040241, AW193530, AW073270, AI587114, AI610690, AI312428, AI469532, AI815237, AI866801, AI536685, AI468872, AW268220, AI805603, AI340519, AW166970, AL120853, AI349645, AI932794, AI500706, AI439745, AW089572, AI648509, AI590120, AW087207, AL110306, AI433976, AI862144, AI249323, AI280747, AI934259, AI696398, AW087445, AI929108, AA470491, AW081298, AW020693,
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1759	HHEYT40	877099	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 679 of SEQ ID NO:1759, b is an integer of 15 to 693, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>

1760	HDQHQS1	877101	NO:1759, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2712 of SEQ ID NO:1760, b is an integer of 15 to 2726, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1760, and where b is greater than or equal to a + 14.	AW405179, AA278430, AI951459, AW130135, AA437355, AA427621, AW183077, AW044380, AI038334, AI540554, AI224500, AA256905, AW440059, AA702920, AI269240, AA662464, AA129087, AI042498, AW401902, AI865421, AA129086, AI023674, AA670374, U51141, AI355031, AA255481, AA600233, AA983314, AA661749, AA278961, AI286001, AW237708, AA512902, R16374, AI000189, AA872607, Z39825, AW338997
1761	HODGR31	877104	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1019 of SEQ ID NO:1761, b is an integer of 15 to 1033, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1761, and where b is greater than or equal to a + 14.	AI701474, AI141563, AA805242, AW151887, AW172894, AI342500, N26482, AI990393, AW275998, AL120029, AI367540, AA905238, AA767195, AA633403, N25228, AA811725, Z39323, N29704, H17935, W05575, N70530, AA766858, AL118631, N98948, AI701701, N66665, AA737077, AB007917
1762	HWLWB9 2	877105	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 607 of SEQ ID NO:1762, b is an integer of 15 to 621, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID	AA167624, AA688144, AA016314, AI499580, AI925014, AA808419, AI081193, AA194836, AA125835, AW419229, AA252083, AA461554, AI500464, AA557634, AI208183, AA988570, AA687098, W33019, AA876407, AW007949, F34751, AA492322, AA908820, R37941, T23517, AA844143, N73484, AA488062

1763	HWLRD79	877106	<p>NO:1762, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 722 of SEQ ID NO:1763, b is an integer of 15 to 736, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1763, and where b is greater than or equal to a + 14.</p>	<p>AA465383, H51960, AA393998, AI300310, AI017609, AI017517, AI819082, AW088106, AW264111, AI446796, AA767844, AI538119, AI583021, AW151792, AW168958, AI252808, T79312, AA429868, AA971656, AI358328, AI039023, AW002810, AW028426, AI336255, AW238738, N64679, AA604414, N64391, AI275601, AA437374, AW003543, H93076, AI962621, AI148567, AA904883, AW194543, F01936, AI674414, AI419876, AI339747, AW299722, C00822, AA661775, T27646, AI473622, AI473612, AL042432, AA775934, AA700143, X63546, I76205, AJ012755</p>
1764	HWLOW7 2	877110	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1357 of SEQ ID NO:1764, b is an integer of 15 to 1371, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1764, and where b is greater than or equal to a + 14.</p>	<p>AA046439, AW243397, AA211360, AA974447, AI128724, AI990335, AA456529, AI655816, H39555, AI479968, AI283132, AI926934, AA534329, AA019380, AI961572, AA011475, AI089295, AI446563, AI807997, AA872374, AI798452, AA256606, AA936249, AI933572, H25408, AW016511, C01415, H28374, AA516090, R43067, AI991488, AA455164, AI217649, AA730296, AI216786, AI357214, AI961183, AI537981, AI203429, AI261590, AI093989, AI950123, R46342, AI803504, AI017015, AA425610, AA535732, AI922416, N21542, AI805514, R35671, R35782, Z38679, AA258077, AI092478, AW170513, AI382468, AA971129, AA455366, AA430349, AA090871</p>
1765	HUSGT72	877111	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 752 of SEQ ID NO:1765, b is an integer of 15 to 766, where both a and b</p>	<p>AA021634, AW028333, AI203234</p>

1766	HPWBM91	877112	correspond to the positions of nucleotide residues shown in SEQ ID NO:1765, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 722 of SEQ ID NO:1766, b is an integer of 15 to 736, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1766, and where b is greater than or equal to a + 14.	AA496246, AI760599, AI371734, AA476481, AA496245, AI955212, AI802040, AA628734, AA476480, AI369165, AI094501, AA744975, AI609830, AI810354, AI420545, AI381025, AI380020, AI675503, AI439413, AI474428, AI784364, AI832169, AA886089, AI362418, AA505488, AA554685, AA812608, AI125614, AA886622, AW389951, AI885739, AA215595, AW389969, AI000868, AF165185, AF172328
1767	HWLVB03	877114	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 507 of SEQ ID NO:1767, b is an integer of 15 to 521, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1767, and where b is greater than or equal to a + 14.	AA112413, AI879634, AI625669, AA287717, AI027610, AI951403, N51076, AI218397, N72114, AI924949, AI278323, AI076224, AI921374, AI910849, AI263735, N25730, AI932387, AW269315, AI221583, AA806202, AI634635, AI357102, AI761994, AI272043, AI298937, AI685902, AI765676, AW298266, AA768195, AI742632, AI825896, AI682622, AA771945, AI367152, AA884764, AW418760, AA897114, AA704188, AA765915, W68725, AI434324, AI075318, AI695150, AA287716, AI424445, N50945, AA127273, H52538, AI037272, AA665059, AW340854, AA279150, H10181, R43600, AA554232, R49161, AI142249, AI003234, R43464, AW365070, AW079259, Z38935, F03815, AW364640, R40549, AI567606, AA788798, AW168090, AA127272, AL119457, AL119324, AL042544, AW383064, AA724943, AL119464, AL119443, AW392670, AL119439, AL119335, AL119355, AL042450, AL042542, U46349, AL134542, AI433107, AL042984, AL043029, U46350, AL043033, AL119497,

<p>nucleotide residues shown in SEQ ID NO:1992, and where b is greater than or equal to a + 14.</p>	<p>D80024, D50995, D50979, C75259, C14429, D80164, T03269, D80045, C14389, C14331, C15076, C14014, D51060, AA305409, AA352266, D80134, AW178893, D51250, C14227, D81026, D80949, D80268, F13647, D58253, AW178775, D51079, AW17740, D80168, D51022, D80522, D81111, AW179328, Z21582, AW352158, AW378532, AA305578, D59695, AW177501, D80251, AW177511, AW369651, AA557885, D52291, D80248, AI905856, AW178762, AA514188, C14298, D80064, AA514186, D80133, AW352117, D51097, AA285331, AW360811, AW378540, AW377671, C14407, AW375405, AW360844, AW360834, AW366296, D80439, D80132, AW360817, AW375406, AW378534, AW352171, AW179332, AW377672, AW179023, AW377676, AW178905, AW178754, AW179018, AW179024, AW179220, AW177505, T03116, AW360841, AW179020, D80302, AW178909, AW177456, AW352170, AW178906, AW177731, AW178907, AW179019, AW178971, D80247, AI557751, AW179004, AW179329, T02974, AW352174, AW179012, AW178980, D80014, AW177733, AW378528, AW178908, AW378543, T11417, D80157, AW179009, AW178914, AW378525, D51103, D51759, AW367967, AW178983, AW352120, D58246, AW177728, AW178774, AW178781, AW178911, AW352163, D58101, C06015, AI557774, T48593, AW378539, D80258, D59503, D51213, D59627, D45260, H67854, D50981, AW378533, AW367950, AW178986, AI525923, D45273, C03092, H67866, AA809122, AW177734, AI525917, Z33452, D59474, AI525920, D51221, D59317, C14344, C14973, AA514184, T03048, AA033512, AI525227, AI535686, AW179013, AW178759, D59551, AF080255, AF073771, A62298, A84916, A62300, AJ132110, X67155, AR018138, D89785, Y17188, A67220, A78862, D26022, A25909, D34614, D88547, AR025207, AR008278, X82626, AF058696, AB028859, AB012117, Y12724, X68127, A85396, AR066482,</p>
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1991	HE9Q119	888051	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1083 of SEQ ID NO:1991, b is an integer of 15 to 1097, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1991, and where b is greater than or equal to a + 14.</p>	<p>H67858, T03048, AI525222, T02868, F13796, AW360855, Z30160, D31458, D51053, D79997, L76158, X95351, AJ132110, A84916, A62300, A62298, AR018138, AR008278, AF058696, AB028859, A82595, AR060385, I82448, AB002449, I50126, I50132, I50128, I50133, X67155, Y17188, D26022, A25909, A67220, D89785, A78862, D34614, Y12724, AR016514, X68127, A94995, AR060138, A45456, A26615, AR052274, AR066488, Y09669, A43192, A43190, AR038669, I14842, AR008443, AR066487, AR054175, D88547, A30438, Y17187, A63261, X82626, AR008277, AR008281, D50010, AR062872, A70867, AR016691, AR016690, U46128, AR016808, AR008408, AR025207, X64588, A64136, A68321, I79511, D13509, AR060133, I18367, AF123263, AL043100, AL045367, AL042404, AA326785, R34387, AL042017, U82535, AB027132, U72497, AF098012, U82536, AF097999, AF098010, AF098011, AL050372</p>
1992	HIACE25	888063	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 889 of SEQ ID NO:1992, b is an integer of 15 to 903, where both a and b correspond to the positions of</p>	<p>AL110457, AA311008, AA732444, N40873, W95689, AW027795, AI521613, AI282709, AA313089, AI694158, N30086, AA278139, AI419081, AA767732, AI918715, D80391, D80196, AI282428, D59787, D51423, D80227, D59859, D51799, D80038, D80269, D80166, D80253, D59619, D80210, D80240, D58283, D80188, D80212, D81030, D57483, D80195, D59889, D80219, D59610, D80043, D59467, D59502, D59927, D80022, D80366, D59275, D80193, D80241, D80378,</p>



1990	H2CBE03	888041	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 592 of SEQ ID NO:1990, b is an integer of 15 to 606, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1990, and where b is greater than or equal to a + 14.</p>	AA307070, D80268, D80366, F13647, C14389, C06015, D80522, AA305578, C14227, AW369651, D50995, AW177440, D51022, D81026, C14331, D81111, D80391, D80248, D59787, AW178986, D58283, D59619, D80210, D80240, D50979, AA514188, D80195, AA305409, D80196, D59859, D80022, D80043, D80166, D59927, D59467, D51423, D51799, D80164, D59275, D80253, D80038, D80227, D59502, D80212, D81030, D80219, D51060, D80188, Z21582, AA514186, D59889, D80439, C15076, D59653, D80269, D59610, D57483, D80193, D80045, D80024, T03116, D80247, D80064, AW378533, D80378, D51759, D80241, C14014, T03269, AW178893, D80133, AW178906, D80302, D80168, C14407, D80157, AW360811, AW178759, D51103, C75259, AW378540, D80251, D80949, AW352120, AW377671, AW375405, C14298, AW179328, C05695, AW378532, D52291, D45260, AW366296, AW360817, T02974, AW179020, AW375406, T48593, AW378534, AW179332, AW377672, AW378528, AW179023, AW178905, AW352158, D51250, AW177731, AW178762, AW178754, AW179019, AW179024, D59373, C05763, D51213, AI557751, D80134, H67854, C03092, H67866, D80132, AA809122, AW179004, AW360834, T11417, D59627, AW177456, AW377676, AW352171, AW352170, AW178907, AW178908, AI525923, C14077, AW367950, AW378520, C14973, C14344, AI525917, D59317, D58246, D80258, AW179012, AW178980, D80014, AW177733, D59503, AW179018, AW178914, AW178774, C14046, D51221, D60010, D59474, AI557774, D58101, AI525920, AA514184, AW378525, AI535686, AW378543, AW178911, AW352163, C14957, AW178781, D59551, AI525227, D80228, AA285331, AW177728, AI525235, C16955, AI525912, AI525922, AI905856, D45273, AI525242, Z33452, AI525925, AI525237, AI525215, AA305720, AW378542, C13958,
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			<p>the general formula of a-b, where a is any integer between 1 to 332 of SEQ ID NO:1988, b is an integer of 15 to 346, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1988, and where b is greater than or equal to a + 14.</p>	
1989	HAIBW90	887996	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 938 of SEQ ID NO:1989, b is an integer of 15 to 952, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1989, and where b is greater than or equal to a + 14.</p>	<p>AI185821, AA481723, AA626700, AW367390, AA313767, AA195688, AA315033, AA479334, AA989012, AA479641, AA479335, AA165042, AI400160, AW370132, AI924188, AW015034, F06368, C15288, H89161, AA364967, AW262875, AI566873, AA371283, AI566669, AI864174, AA304171, AI337891, AA295611, AA363869, T34361, C16344, T35252, AA374955, C16080, AI758577, AA406614, AW131846, AI811951, T19059, AW087747, AA777509, AA934901, N40173, R46865, AW157527, AI374781, AI379523, H64413, AI371781, R78607, AW173107, AA532727, AI742506, AA195689, AA235284, AA363917, AI801399, AI081113, AA295789, AI742505, AI087379, AA527113, AA527036, AA373921, AI952545, AI269215, AI245243, AA302499, AI792601, AA600140, AI040546, H92421, C16267, AI805770, Z24901, AA625963, AI139790, AI360032, N40209, AI084568, D57610, AI753737, C16455, R35721, AA159931, AI024890, AI869836, AI829158, AI804015, AA477326, AA430365, AI640196, N30689, AI371005, AA478600, AA256968, AA021044, AA657967, AW072764, N41298, AA905154, AA758776, AI955815, AA865424, AI857650, AI091988, AW242058, H92638, AA234867, AI864141, AA252106, AA424350, AA302462, AI468749, AW090440, AI336687, AA732498, AA302463, C16184, R78608, AW085952, AI934133, AI269595, AI422703, F05286, R46768, C16334, AB006077, AF006484</p>

1987	HWLOA40	887892	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 507 of SEQ ID NO:1987, b is an integer of 15 to 521, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1987, and where b is greater than or equal to a + 14.</p>	<p>AF079763, AL110221, I25048, AF162270, AL117648, L13297, AR000496, A93914, U39656, AF090900, I09499, AF182215, AL133560, AB031064, AR020905, AL133637, U92992, AF100931, X66862, AF054599, AL049938, AL133557, A93350, AL096744, AL050146, AF061981, A52563, X66366, AJ012755, AL080118, X61970, U75932, AF113694, E03348, AL133080, AF051325, U58996, X84990, E01314, AF118558, AL049452, AL133031, AF061573, AF124435, AF076464, AL050277, A65340, AL049283, I33391, AL137530, M30514, L30117, S82852, AL133075, AL137558, AL117440, AL049447, AL133067, AL133084, AL137557, AF118070, AL133640, AL117626, I26207, AF111851, A45787, AF106657, X98834, AF017437, A08908, AL049300, AL080146, E02349, AL137554, AL080074, AB007812, AL137529, Y09972, X57084, AL023657, X93495, AL137555, AL133049, A03736, AF104032, I68732, I00734, AL133559, AF090934, AF145233, AL049430, AF113699, AF162782</p>
1988	HCQCF10	887936	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by</p>	<p>AA298484, AA297176, AA297147, AW001287, AW300770, AI691072, AA563933, I95745</p>
			<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by</p>	<p>W15466, AI862531, AI823607, D80998, AA115712, AA410501, H66313, W37614, AF131758</p>

	AA989485, T98916, AA487702, AA297484, AA297153, AA464649, AA292774, AW170481, AI963760, W79558, AA394263, AI986058, AA903542, AW079683, AA487488, T98961, AI342966, AI982682, U46323, AA287210, AA297527, AA341051, AA861541, AA297453, AA557937, AA133595, AA464548, AA553875, AA486446, AI275661, AI719497, AA496440, AA481372, AI673125, AA565649, C21003, AA428283, T53668, AA298491, AI749779, AA421514, AW007555, AA411012, AI273816, N57294, AA340864, AA133686, AA327635, AA411355, AJ011497, AC003688, AF087825, AL137550, I89947, AF069506, AL137480, I48978, AF159615, A70386, AF102578, A77033, A77035, A08910, A08909, AL050024, X83544, AL049347, AL137459, AF177401, AR038854, AF026816, A08913, Z37987, U73682, AL110280, A58524, A58523, AL122110, AF183393, Y14314, AL117435, AL080159, AL035458, AL122050, AF124728, U80742, AL137548, Z97214, AL137539, AF087943, AL117457, AR068753, AL137533, AR034821, AF113019, A07588, S36676, S83440, E02221, X82434, Y16645, AL133113, U35846, Z82022, I25049, AF185576, AL080126, AF057300, AF057299, AF013214, AL136884, I48979, AF082526, I33392, A76335, A08916, A08912, AL137292, AF008439, I89931, S63521, A65341, AF090903, AL080148, AJ005690, I49625, AF119336, AJ000937, AL117460, AF100752, X63574, AL133112, X63162, AF185614, AL122118, AF113677, AL117587, AL137271, AF111849, AF026124, AF180525, AF002672, U49908, AL117635, AF097996, AL049382, AL050172, AL110296, I66342, X83508, A15345, AF113689, AF067728, X80340, AF039138, AF039137, AL122093, AL050138, AF106862, AR011880, AL133623, AL137463, S61953, AL137283, AL050149, AL133619, AL137521, X72889, AL137478, AL137560,

1986	HLJEA63	887857	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1569 of SEQ ID NO:1986, b is an integer of 15 to 1583, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1986, and where b is greater than or equal to a + 14.</p>	<p>AR036903, A11245, A02710, A35536, A35537, A07700, A13392, A13393, I19517, A02135, A04663, A02136, A04664, E03165, A97155, A76773, A22413, D28584, A70040, I21869, I01992, AR066482, AJ244005, AR028564, A83151, I08051, I00081, I00074, A98420, A98423, A98432, A98436, A98417, A98427, A15078, Y11926, I03665, I03664, Y11923, I01968, A13388, E00974, A02228, E00954, E00952, E00953, E00955, I08049, I43960, AR021440, E02221, E01614, E13364, I08776, A10360, E02679, E02104, E02098, A92666, E02001, E01718, E02003, E02102, E03550, E02096, A28163, E02100, E01997, A58998, E02291, E02292, E02293, E01999, E02396, E02327, E01563, E02431, E01693, E01696, A92668, AR005163, AR005154, AR005157</p> <p>A1148864, AW080794, AW170514, AW006431, A1832265, A1188759, AW001480, AW168034, AW129649, AA769641, AW172714, A1598083, AA552439, A1587171, A1151456, AA151778, A1684150, A1339143, AA621571, A1221080, A1279608, A1347951, AA512993, AW243807, A1471439, AA627704, AA973368, A1346482, A1050852, AA194025, AA410196, A1262321, A1829191, A1344709, AA808606, AA832492, A1984534, AA149786, A1189417, A1446633, A1828290, AA580361, A1206376, A1924092, T98835, AW273245, A1300760, A1271915, AA133687, A1074095, AA659629, AA450853, W07258, A1435798, AA976596, AA603691, AW292998, A1950654, AA875879, A1244806, N29871, AA948384, AA946812, AA862576, A1804146, A1982855, AA812251, AA888824, N79741, A1832503, AA133726, AA577501, AA297383, A1220826, AA297386, AA535896, H95187, W79526, AA287234, AW190388, AA631290, AA908173, R47933, AA872504, AA496489, A1301669, AA297379, AA427910, R69472, AW004671, AA284504, AA746077,</p>
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			<p>than or equal to a + 14.</p> <p>AL044364, AL043445, AL038025, AL043422, D80210, AL036725, D51423, D80134, D59619, D80391, D80193, D59927, R47228, AL043586, D80196, D80949, C14227, AW450335, AL039521, AL039085, AL036196, T23947, AL037526, AI535783, AL037639, AW451070, D80366, D80168, AL037615, D80045, AI535983, AW452756, T11051, D81026, D50995, C14014, C75259, AL036767, AL036117, AL039459, AL039842, AL036924, D59889, AL037601, AI557751, AL036238, C15076, AL036733, AL037082, AL036679, AL038851, D80022, AL036418, D80038, T23659, AL037054, D80195, AL037027, AL036765, AL039504, AL036158, D58283, T11417, D81030, C14429, AW293068, D80188, AL037047, AL036964, AL036190, D51799, D80378, D59467, AL036650, F13647, AL036191, AL037104, T03269, AL037177, AL036998, AL037679, D50979, D80522, T48598, D80212, AL037178, C14298, AL036207, AL036227, D59502, AL037643, Z21582, AL036132, AL036167, AA285331, AL037600, AW450376, AA514190, D80164, C14331, D59859, D59695, D80166, AI021934, AL037124, D80269, AW206560, D80268, AL036152, AL042334, AL036174, Z25782, AL037021, D52291, D58253, D80024, AL048425, Z99396, AL036900, AL036139, D57483, AL044447, D59610, AL037085, D59627, D80241, AI910186, D81111, C14407, C14389, AW451416, H00072, T23656, AL037081, D51060, AL036228, AW178893, AA305409, AL037077, AL036268, D51079, AI763414, AL037569, AL036953, AW177440, AA305578, D51022, AW179328, AL039555, AW178775, D80014, AW378532, D80248, AL036808, AW352158, AW377671, AI905856, AW369651, D51213, D80251, D51097, AA514188, AL036858, AW178762, AW177501, D80064, AW177511, AL037002, AW360834, D80133, AA514186, AW360811, AI557774, AW378540, AW352117, T02974, Z25783, AL039417, C05695,</p>
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1983	HSWBP93	887475	<p>than or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 509 of SEQ ID NO:1983, <math>b</math> is an integer of 15 to 523, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:1983, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	<p>AA218952, AA422118, AI267777, AA761846, AA974489, AA249308</p>
1984	HSLJF91	887535	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 450 of SEQ ID NO:1984, <math>b</math> is an integer of 15 to 464, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:1984, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	<p>AI525881, D78870, H11172, R19956, AA308077, AI591060, AA350839, AI557291, AF091352, A64392, AB021221, S82167, X62568, M32977, A64394, A64398, A64402, AF022375, A92244, A64400, X81380, M31836, M32976, AF071015, AF133248, A92248, S85192, AJ010438, A92246, M27281, A64396, A92242, AF14570, E13215, AF186236, E15157, M32167, M33750, S38083, X89506, AF133249, AF133250, M61974, A64404, AF215726, AF222779, AF215725, L20913, S38100, S37052, AF062645, AF106942, AF022179, S85199</p>
1985	HKLSC61	887803	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 1219 of SEQ ID NO:1985, <math>b</math> is an integer of 15 to 1233, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:1985, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	<p>AL039924, AL045794, AW013814, T02921, T24119, T24112, AL036630, D51250, D80043, D80253, D59787, D80219, AL039629, AL039625, AL039648, AL038837, AL039074, AL037726, AL039678, AL039108, AL039538, AL039564, AL039156, D59275, AL039659, AL039566, AL039509, AL039150, D80227, AL044530, AL038531, AL039109, AL038821, AL040992, H00069, AL043423, AL039128, AL044407, AL036973, AL045337, AL037051, AL045353, D80240, AL039386, AL039476, AL045341, AL039423, AL042909, AL043441, AL044412, AL039410,</p>



1981	HFVJL45	887399	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1413 of SEQ ID NO:1981, b is an integer of 15 to 1427, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1981, and where b is greater than or equal to a + 14.</p>	<p>I13521, I52048, I44531, A90655, X58217, Y11923, V00745, I44516, AR031566, A58525, I01995, AR038066, AJ230933, AF019720, I18895, E03165, Y11926, A20699, E00696, E00697, A60957, E03813 AA429438, AI074616, AW008223, AI523733, AA969328, AI309184, AI910363, T57069, AA973222, AW009928, AI266526, AA664093, AI808681, AI033844, AA860930, AA256367, H49508, AI807270, R95740, AA256366, R95884, AW449536, AI027719, H80516, AI674127, AI202271, T57140, T11308, Z20897, AI247797, AA494323, AI866606, AI866611, H49507, R20117, T18508, T81888, AI247938, AI150468, T71213, AL119324, AL119399, AL134524, AW372827, AL119443, AW392670, AL119391, AW363220, AW384394, AL119457, AL119484, AL134528, AL119439, AL042544, AL119319, AL119497, AL119522, U46346, AL119363, AL119335, AL119496, U46350, AL134518, U46349, AL119444, U46347, U46351, U46341, AI142132, Z99396, AL119355, AL119483, AL042614, AL119396, U46345, AL134538, AI142137, AL134530, AL134519, AL134531, AL119401, AL079687, AL037205, AL042980, AL042896, AL043037, L48516, AC004022, L76193, AC005021, AB026436, AR060234, A81671, AR054110, AR066494, AR069079 AF061056, AF084644, AF084645, AJ009937, AJ009936</p>
1982	HWLFE56	887421	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 697 of SEQ ID NO:1982, b is an integer of 15 to 711, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1982, and where b is greater</p>	

	A11245, I60241, E12615, A02710, I60242, AR035193, A07700, A13393, A13392, A92133, AR027100, I66498, I66497, I66496, I28266, I66486, I21869, A70040, I84554, I84553, I08051, A10361, I19525, A25909, A67220, D34614, X68127, AR025207, Y17188, A85396, I44681, A85477, A86792, A44171, AR038855, I66495, I66494, I66487, AB012117, A38214, I56772, I95540, M28262, AR066482, I68636, AR035975, AR035977, I66485, AR031374, AR031375, A85395, A58521, I18371, A60985, AR020969, A60990, A85476, A91754, A62298, AR037157, AR008430, AF082186, AR035974, AR035976, AR035978, AJ244004, AJ244005, AR008429, A49700, X81969, AJ244003, I48927, A62300, AR054109, AJ244007, A93016, A98420, A98423, A98432, A98436, A98417, A98427, D14548, AR038762, I63120, A98767, U94592, Y16359, A93963, A93964, A58524, AR036905, A58523, AR063812, D78345, Y09813, AR022240, A97211, X83865, I15717, A63067, A51047, A63064, A63072, I15718, AR068507, AR068506, I05558, I08396, AF118808, A95117, I08395, X73004, AR018924, AR018923, A48774, A48775, AR015960, AR000007, AR015961, X55486, I19516, S70644, D88984, A23998, A95052, AR043602, AR043603, Z96142, I00074, I92483, AR038286, E03627, A60212, A60209, A60210, A60211, I62368, A22738, A84916, A24783, A24782, I03665, A64081, I03343, I03331, I00682, D50010, A81878, I03664, A77094, A77095, A15078, E00523, D26022, A11624, A11623, E00609, A64973, I49890, A11178, E01007, AF156296, AR036903, D28584, E14304, I19517, A27396, A76773, A22413, E16590, A49045, E16678, A82653, E16636, Z32836, AF156294, E04616, I01992, AF149828, I25027, I26929, I44515, I26928, I26930, I26927, I25041, AR031488,

	AL041098, AL040621, AL043538, AL041324, AL040464, AL044162, AL041086, AL043496, AL041296, AL041233, AI557084, AI546875, AI557787, AL039156, AL043441, AL041140, W25674, AL039150, AJ239433, AL038821, AL039085, AL040193, AI541013, AL043445, AI525653, AI526184, AA585155, AI535813, T24119, T23985, AL040149, AI546899, AL045725, AL041197, D61254, AL043612, T24112, AL039564, AL039538, AI557807, AL039108, AL039678, AI526196, AL039915, AL039074, AL038837, AL039625, AL039648, AL039629, T23888, AI541048, AL037726, AL038531, AL039109, AL040992, AL039924, AL040463, AL039128, AL044407, AL039386, AL036973, AL045337, AL037051, AL039509, AL045353, AL036725, AL039423, AI546891, AL047219, AL041227, AL039566, T23947, AL047057, D59889, AL039659, AL047170, T41289, AL040119, AL047036, AL041292, D55233, AL041159, AL041051, AL047183, AL040322, AL041131, AL046330, AL045341, AL041133, AI541509, AL041238, AL041142, AL045817, AL045794, AL039410, AL040529, AL040625, AL040510, R29218, AL042909, AL043467, AL044186, AL044037, AL040091, AL040128, AL040168, AL040255, AL040285, AL040342, AL040332, AL040617, AL045684, AL040745, AL041347, AL040370, AL043677, AL046442, AL040553, AL040839, AL041752, AL043444, AL043775, AL044165, AL043492, AL041602, AR017907, AR062871, AR062872, AR062873, I13349, A20702, A20700, A43189, A43188, A84772, A84775, A84776, A84773, A84774, AR067731, AR067732, A58522, A91750, U87250, A02712, A18053, A95051, I06859, A23334, A75888, I70384, A18050, A60111, A23633, AR007512, AR043601, A91965, A35537, A35536, A02136, A04664, A02135, A04663, E13740,

1980	HADME31	887280	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 901 of SEQ ID NO:1980, b is an integer of 15 to 915, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1980, and where b is greater than or equal to a + 14.</p>	<p>E02832, E02493, E04897, E02578, I48917, E02708, E02579, E02709, E03404, E03403, E03405, X51935, K02286, E06063, I56011, L03546, X85801, E00853, A08501, E06847, E06846, E03402, I05760, X63434, X02724, X01648, X65651, A20747, A83180, AF097647, E01176, A76865, Z36790, I01583, E01603, I01586, E01178, E01604, E01177, E04615, A27451, A27452, E03605, E03858, A31147, A31179, A31178, A31148, A07733, A07732, A31150, A31181, A31151</p> <p>AI376391, AW044644, AA435896, AI306612, AA824370, AA626315, AA991266, AI192974, N78952, AI401045, N78829, AI077370, AA448861, W68342, AA724792, AI708684, AI370929, AI015595, AI401211, AW043992, AA862620, AI201717, AW005929, AI498880, AI718029, AI333236, W93038, AI092949, AI147031, AI004135, W17346, AA027214, AI525556, AA447925, T98518, AA652731, AA585439, AA878662, W17259, D80253, D80043, D80219, D59787, D59275, AA401790, D80227, AI525316, D51250, W68383, D80240, AI541365, AA585356, D80045, D80210, D51423, AA585440, AI541510, D80134, AI535660, D59619, AI541508, D80391, AI526140, D80193, AI546855, AA585101, AI535639, Z30131, AI541523, AI546828, AI526180, AI541374, AI557731, AI541514, Z28355, D80196, C14227, D80949, AI557262, T11028, AI536138, D59927, AI546999, AI525306, AI557238, AI143531, AI547039, D80168, AI342055, D80366, AI541205, AA585453, AA585434, AI541535, AI541307, T11051, AA585476, D57491, AI556967, AI557799, C16300, R29445, AI525431, AI546945, AI540967, D81026, AI557082, D50995, C14014, AI541534, C16305, AI525856, AI525320, AI557808, AI525328, AI526194, C75259, AL040155, AL041346, AL041096, AL047012, AL041358, AL041277, AL041163,</p>
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1979	HWLWR3 9	887192	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2472 of SEQ ID NO:1979, b is an integer of 15 to 2486, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1979, and where b is greater than or equal to a + 14.</p>	AC005911, AC002549, R69689 AI088434, AA621667, AI346645, AW263010, AI09518, AI625220, AW304172, AW029222, AI608891, AI813425, AW276382, AI827115, AW074235, AI858601, AW082804, AI985831, AA669865, AW170309, AA618054, AI795849, AI683880, AI281027, AI963363, AI623888, AI828889, AW192796, AI818478, AW188700, AW316981, AW183022, AI144179, AA738239, AI955571, AI128137, AA975350, AA523124, AA161208, AI952102, AW339226, AI589258, AA781230, AW337829, AA931097, AI682815, AI348149, AA745890, AI000902, AI187264, AI554320, AA284668, AI304724, AW369971, AI591155, AI149294, AW083724, AI274754, AA969848, AW026240, AI750653, AI433158, AI350439, AA158743, AW238819, AW192073, AA157530, AI357834, AA464119, AA883794, AW176385, AA554892, AI910051, AW362693, AW337353, AW362669, AW062307, AI750652, AI188344, T89676, AI370440, R74284, AI766050, AA100117, AI431334, AA583615, AA284669, AA973099, T29593, AI750507, AA463985, AA192627, AI273199, F06065, AI269833, AI702408, R24159, AI624229, AI583131, AA040727, AW338259, T19421, AW362710, AA345817, AI686279, AI471394, AI702510, AA894583, R39975, AI589449, AA886172, AW081126, AW362723, AW362732, AA195849, AI915757, AI754103, R74194, T19420, AA906982, R27515, AI932864, R80161, R10151, AI269834, AA039591, AA158183, AL042359, AA159558, AW369968, R10562, AA159112, R25662, AA039590, AI1978, E01560, E01559, E00924, E01238, E02114, D00244, E01467, A21571, A09202, A35395, A04029, X02760, I03932, I07013, E00178, A10915, A10916, A18397, X02419, E00421, E02577, E02649, I08788,
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	AC007358, AP000503, AC007993, AJ003147, AC002477, AL035587, AC004216, AL096791, AF037338, AL021155, AL031602, AL121603, AL049869, AC008372, AC006312, AC002301, AC006132, AC004983, AC005229, AC007225, U82828, AL031681, AC004596, AC006013, AC005531, AP001052, AC006285, AC005154, AC006064, AC005920, AP000493, AL021937, AC005899, AC005764, AL031668, AC005578, AC004812, U95740, AC005004, AC004895, AC005940, AC005317, AC005722, AC003041, AC007216, AP000045, AP000113, AL117258, Z98200, AC004167, AC000070, AP000513, AC002426, AC002542, AL121653, Z85986, AC002310, AC005952, Z99716, AF134726, AC005280, AC005015, AL109952, AC003029, AL049779, AC005821, AC005057, AC006130, AC003043, U62293, AF111167, AC006581, AL034548, AC005071, AC005694, AC007899, AC005484, AC005844, AC004813, AC002395, AC002044, AL022326, AC002316, AC003665, AL096701, AL031680, AC004263, Z94721, AL022476, AL049843, AC006211, AL049766, AC007773, AC007308, AC006547, AC004382, AJ246003, AC006071, AL049780, AC005037, AC005520, AC002544, AC005519, AC007298, AC005193, AC002470, AL031577, AL031286, AC002558, AC004150, AC005089, AC008115, Z93017, Z86090, AC005086, AC004990, AP000501, Z98884, AC004796, AC005065, Z98750, AL078603, AC004686, AC002472, U95742, AC007021, AC005104, AL080243, U47924, AB003151, M63543, AP000050, AC006270, AP000036, AC004820, AC004084, AC000353, AL024507, AC002400, AC007114, AL031178, AP000031, AC007151, AC006160, AC004655, AC005295, AL022336, AC016025, AP000952, AC006001, AL133353, AP000133, AC005740, AF205588, Z77249, AL031230,

1978	HMEKH10	887172	<p>NO:1977, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 4471 of SEQ ID NO:1978, b is an integer of 15 to 4485, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1978, and where b is greater than or equal to a + 14.</p>	<p>AW341677, T06373, AA923375, AI902953, AI016704, AI817516, AI963720, N92756, AL037683, AW303196, AW301350, AW274349, AI368745, AI345681, AI345675, AW088846, AI270117, AW271904, AA577748, AL045077, AI859946, AI267818, AI625244, AI679782, AW302048, AI570261, AW029038, AL044940, AI696962, AW162049, AI929531, AW276435, AA843450, AA587604, AI962050, AA828047, AI061313, AA878149, AA603323, AA502175, AW191886, AI457397, AW407578, AI370475, AW021116, AW088202, AI339850, AI814735, AI890348, AA501784, AW075511, AL038785, AI561060, AW263864, AA503258, AA904211, AL138265, AA533408, AA177061, AA601680, AI918421, AI567674, AI049722, F17700, AA490183, AF085833, U95822, AC006480, AC006441, AC005102, AP000553, AC002492, AL022328, AL020997, AC004217, AC004491, AC002350, AC003003, AC005736, AL133448, AL034555, Z98036, AC005081, AC004967, AL022318, U91326, AL121658, AC007666, AC005562, AC004659, AC005488, AC006011, AL049569, AC020663, Z95152, AL133355, AC004841, AF030453, AL031283, AL034549, AC007242, AC005011, AC002425, AC007055, AB023049, Z83838, AC008009, AF053356, AC002565, AC007192, AL132712, AC005666, AC005839, AL049795, AL033376, AL034423, AC005529, AL022165, AC004019, AC005088, AL024498, AL049830, AC004859, AC009516, AF001552, AL020993, U63721, AC006271, AC004228, AL021395, Z84480, AC004531, AC006449, AF001549, AC000052, AF031078, AP000502, AC004966, AL022313, U91323, AC004087, Z93241, AC005874, AF134471, AF030876, AC004878,</p>
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1977	H2LAS29	887155	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 484 of SEQ ID NO:1977, b is an integer of 15 to 498, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	<p>A02136, A04663, A04664, A11245, A02710, E12615, AR035193, E14304, A07700, I00074, I01992, A13392, A13393, I19517, A27396, A76773, A22413, I28266, I21869, I13349, AR027100, A49045, I25027, E16678, E03165, E16636, I26929, A82653, I44515, I26928, I26930, I26927, A58525, I08051, A93016, A51384, I03665, Y11923, I03664, A15078, A70040, AF156294, A97211, E16590, E00523, AR038286, I25041, I92483, AR000006, AR038762, D88984, I49890, I44516, U87250, A92636, I00079, D14548, E02221, E01614, E13364, A58526, A91753, I00077, AR008430, AR035975, AR035974, AR035977, AR035976, AR035978, D34614, AF019720, S70644, AF096810, A18722, A91754, AB012117, A97221, AF156303, AF156302, X58217, AR064706, I07429, I68636, M32676, AF156304, A10361, AF156299, A60957, I84554, I84553, A60968, AF096793, Y11449, AR066482, A60985, A60990, A60987, S65373, Y17188, A91965, D44443, AB007195, X15418, I69350, AF130655, AR027069, A10363, A20701, X73003, A52326, A04710, I08250, E04616, X13220, S83538, Y11447, AR063812, I07888, E06034, Y11920, Y11587, AL122049, AF156300, AR066494, AR060234, I03663, AL137271, A02711, AF183393, AL117585, AJ000937, I89947, I48978, U80742, AL137463</p>
				<p>AW408152, AW263155, AA360413, AA314512</p>



	AI284517, AI500706, AI491776, AI445237, AI151138, AI889189, AI521560, AI828731, AI500662, AI284509, AI889168, AI499285, AI888899, AI433968, AI866573, AI633493, AI434256, AI888661, AI284513, AI888118, AI758816, AI633419, AI440252, AI610115, AI888903, AI045774, AI040241, AI269862, AI620284, AI917963, N80094, AI913452, AI520702, AI799199, AI90042, AI932794, AI073994, AI889953, AI699011, AI042551, AI933785, AI520809, AI151785, AI537515, AI888944, AI468872, AI344817, AI929108, AI569309, AI796743, AI93026, AI608676, AI868831, AI922901, AI859464, AI364788, AI036638, AI119791, AI251830, AI365256, AI067797, AI013456, X68127, AI118808, Z96142, AI062871, AI036905, A95051, AI031374, A85477, A85396, AI244003, AI244004, AI031375, I18371, AI025207, V00745, A44171, AI018924, X73004, A63067, AI9700, A51047, A63064, AI018923, A48774, A63072, A48775, AI017907, AI068507, AI068506, AI38214, A58521, AI015960, I56772, I95540, AI000007, AI015961, AI020969, AI98767, AI02712, AI25909, I19516, AI230933, AI93963, AI93964, I63120, A95052, A64081, AI043602, AI043603, AI043601, A95117, AI18053, I06859, AI18050, AI4772, AI23334, A75888, I70384, A60111, AI23633, AI007512, AI23998, I60241, A84776, I60242, A84773, A84775, AI062872, A84774, AI062873, AI92133, AI067731, AI037157, AI067732, AI86792, AI58522, AI91750, A58524, A58523, AI054109, AI20702, AI43189, AI43188, AI20700, AI156296, AI244005, E13740, Y11926, A67220, I03343, AI036903, AI81878, I66495, I66494, I66498, I66497, I66496, I66486, I66487, D28584, AI24783, AI24782, AI35536, AI35537, AI022240, AI02135,

		<p>SEQ ID NO:1976, b is an integer of 15 to 1712, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1976, and where b is greater than or equal to a + 14.</p>	<p>AL042909, AL039423, AL039410, AL039085, AL045353, AL036973, AL044407, AL039538, AL039924, AL039386, AL038821, AL044530, AL039566, AL039509, AL036196, AL043445, AL037526, AL037639, AL038025, AL036418, AL045341, T24119, AL043422, T24112, AL037615, AL036767, AW013814, AL043441, AL045794, H00069, AL043423, AL036924, AL037082, AL038851, AL037104, AL036117, AL036238, T23947, AL036190, AL036679, AW451070, AL036733, Z99396, AW452756, AL037081, AL037027, AL037601, AL036191, T02921, AL037178, AI535983, AL036158, D51250, AL036765, AL036998, AI535783, AL037054, AL036964, R47228, AL036174, AL037177, AL037021, AL037643, T23659, AL037600, D80253, AL037049, AL037124, AL036858, AL037077, AL036139, AL119457, D59787, AL036132, AL036167, D80043, AL036268, D59275, AL037085, AW450376, AL036152, D80219, AL042544, AL036228, AL119399, T48598, AA514190, Z25782, AL036900, AL038447, D80227, AL036953, AL036808, AL119324, AL042382, AL037047, AL036207, AL079794, AL036227, D80240, AL041452, AL036742, D80134, AL036719, AA631969, AL036150, AL037002, D51423, T11051, AI763414, AL042745, AL119511, AL036999, AL119748, AI174394, AL040243, AL037679, AL042628, AL037569, D80210, Z25783, AI696819, AW151136, AL047675, AL079741, AL046356, D59619, AW029611, AI280732, AL045266, AL079977, AW071349, AI608936, AL042744, AI249877, AL045620, AL046926, AI591407, AW089179, AL047092, AL045163, AL039276, H00072, AL121286, AI433976, AI680162, AL045500, AL042787, AI433157, AI554821, AL049085, AI539771, AI537677, AI432666, AI500659, AI815232, AI648502, AI805769, AI801325, AI648663, AI500523, AI625467, AI582932, AI923989,</p>
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				AJ238278, X63574, AJ012755, AL122123, AL133104, AF017437, AF097996, AL050024, AL133640, AL117583, AL117585, AL122098, AL133113, U42766, A03736, X96540, AF061943, AF003737, AF162270, Y11587, AL137550, AF090943, AF183393, AF158248, AL137292, S61953, U67958, I42402, A93350, AF026124, AF017152, AF090900, AR038854, AL080074, AR000496, U39656, Z72491, AF079763, AR059958, AL110221, AL117457, AF111112, AB019565, AF119337, AL049430, AF113699, AF153205, AF113691, E07108, A07647, AL050146, AL137476, AL137526, I09360, X70685, AL049314, AL137648, AJ242859, L31396, AL096744, AL110225, AL117394, L31397, AL133093, AF113676, AL133565, AF079765, AF057300, AF057299, AJ000937, L30117, AF111849, AL133557, E02221, AL080060, AL133067, AL137556, A90832, AL050172, AF210052, AL122118, AF118070, AL122050, AL133098, AL137533, AL050108, AF146568, AF090896, AF106657, AF118064, M30514, X84990, AL080127, AL133075, AL117440, AL080137, AL137527, E08263, E08264, A93016, AL137480, AF032666, AL049938, A45787, E04233, U96683, AL133568, AJ006417, X53587, AR038969, AR013797, AL133081, AL110197, Y09972, AF061573, U68387, AL137523, X87582, U58996, Y07905, AF081195, AL137294, AL137283, E06743, X83508, AR020905, AL137478, AL137488, AL050092, E05822, E08631, Y10080, L19437, I09499, U78525, AF051325, X92070, AL137705, AL023657, AL117432, AF081197, U49908, AL080086, AF106827, Z37987, AI732659, AI791955, AA577625, AW083143, AW138645, AL038837, AL039074, AL039564, AL039109, AL039108, AL039156, AL037051, AL038531, AL039659, AL036725, AL039625, AL039648, AL039629, AL039678, AL040992, AL039150, AL039128, AL037726, AL045337,
1976	HKLRB09	887114	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1698 of	

	AI440252, AI306613, AW051088, AI433037, AI632408, AI886181, AW268302, AA715307, AW072719, AI933589, AI611348, AI635067, AI610645, AL040243, AW103371, AI608936, AI874166, AI254731, AI921248, AI819976, AW023859, AL119791, AL043981, AI886753, AI349004, AI686906, AI927755, AL121270, AI798456, AW051258, AL042551, AI624293, AI611738, AW148970, AI571909, AI619502, AI677796, AI352497, AI349598, AI684021, AI288305, AW118518, AL039276, AW269097, AW026882, AI923370, AI269205, AI064830, AI929108, AI436429, AW193125, AL110402, AI371228, AI500061, AI572892, AI613548, AW083804, AI654276, AI620089, AC004985, AF161453, AF015416, AI2297, I89947, AL133014, AL137271, AL122049, AF111851, AF091084, AF118094, AL133072, A08913, AF078844, AL137521, AL137557, AL117435, AF113019, AL049283, I33392, AL133016, AF026816, AL110280, I48978, AF185576, A08916, U35846, AF008439, A08910, I89931, A08909, AL137538, AL050138, X72889, I49625, AL137459, U80742, AF090901, X98834, AL049464, AF106862, U72620, AL122110, AR011880, AL133080, AF125948, AL133077, AF177401, U91329, AL049452, AL049300, AF125949, A65341, Z82022, AF090903, AL133560, AL137463, AF087943, AL133606, E03348, I03321, AL137560, AL117460, Y14314, AL050149, AL080124, E07361, AF113694, X82434, AF113689, Y16645, AL110196, A77033, A77035, AL080159, E15569, S78214, I48979, S68736, AL049466, A58524, A58523, I00734, X93495, X65873, AF113690, AF090934, AF113677, Y11254, AL049382, E02349, AF113013, AL050277, AL050116, E00617, E00717, E00778, AL122093, AL050393, AL122121, A08912, I26207, AF104032, AF067728, U00763,

<p>SEQ ID NO:1975, b is an integer of 15 to 771, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1975, and where b is greater than or equal to a + 14.</p>	<p>AI362190, AA443159, AA975136, AI144548, W94114, R33101, AA713985, AI350918, AI301665, AA928203, AI864872, AA702159, AI052284, AI340996, W95293, AA228149, AI497988, AA084519, AA223979, F22291, F21666, AW262545, AI421254, W69785, AI492628, F22149, AI038217, AA782142, H51447, F29644, W95550, AA633151, W51800, AA524187, AI220373, AI718892, AA978346, H51405, AA866163, N73336, T48735, F26124, AI971845, W78797, AA704978, W69733, AI066547, AA082415, AA224044, AA918327, W92564, Z22018, AA306319, AA928012, W46469, AA002051, AA463446, AA970170, W95702, F36672, F20308, R33196, AI460269, F34207, W95701, AA378930, AA090815, AA661851, C21256, T48734, F18648, AA428745, AA093730, AA666150, AA062817, AI027170, AA001847, AI264217, AI653972, AI202069, AL079963, AI539028, AW149925, AI269862, AI364788, AL047763, AL041150, AL042628, AW198075, AI537989, AI932794, AW268220, AI334450, H89138, AI564259, AL119863, AI648663, AI344928, AI358701, AI582932, AL036638, AL045500, AI570807, AL045266, AW079572, AI308032, AI698391, AI344785, AI670009, AW087445, AI889953, AI520809, AA225339, AI345148, AI433976, AL037454, AI620284, AI468872, AW020693, AI335209, AI433157, AI270183, AI554821, AW151136, AI539771, AI537677, AI494201, AI802542, AI500659, AL036631, AW168485, F27788, AI815232, AI801325, AI500523, AI866090, N80094, AI923989, AI284517, AI500706, AI445237, AI491776, AW151138, AI889189, AI521560, AI500662, AI284509, AI288285, AI889168, AI866573, AI633493, AI434256, AI627988, AI344933, AI805769, AI888661, AI284513, AI888118, AI524671, AW162194, AI889147, AI812015,</p>

1973	HCE4U96	886788	SEQ ID NO:1972, b is an integer of 15 to 451, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1972, and where b is greater than or equal to a + 14.  Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1371 of SEQ ID NO:1973, b is an integer of 15 to 1385, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1973, and where b is greater than or equal to a + 14.	AI688460, T09220, AA338971, AI969431, AI862437, AI862438, Z42464, W46479, AW163719, AW139376, AA314949, AI214207, AC004382
1974	HWLEL48	886914	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 734 of SEQ ID NO:1974, b is an integer of 15 to 748, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1974, and where b is greater than or equal to a + 14.	AW014333, AW376283, I82554, U79725, I82549
1975	HTGBT14	887098	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 757 of	AA528172, AI870515, AW022634, AI122636, AI807139, AI524135, AW117562, AI332968, W94241, AI034051, AW119174, N53839, AI378914, AI708759, AA699609, AA425884, AA909771, AI086409, AI312652, AI382156, AI161356, AA635388, AA633491, W94238, W46444, AA746370, AA228039,

1970	HAIJV26	886331	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 761 of SEQ ID NO:1970, b is an integer of 15 to 775, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1970, and where b is greater than or equal to a + 14.</p>	<p>AP000203, AL034417, AF042090, U71148, AC005533, AC004042, AL079352, AL049844, AL031123, AC004788, AC003119, AC007786, AL031965</p> <p>AW160977, AW392670, AL119483, AL119497, AL119443, U46341, AW372827, AW384394, AW363220, AL119319, AL119457, AL042975, AL119324, Z99396, U46351, AL119484, AL119363, AL119341, AL119391, AL119355, U46350, U46347, U46349, AL119444, AL134902, AL119396, U46346, AL119335, AL043011, AL134920, AL134533, AL119439, AL119522, AL119496, AL042970, AL134538, AL119399, AL042965, AL134518, AL037205, U46345, AL119418, AL042614, AL042995, AL134531, AL042896, AL043029, AL042450, AL042544, AL134526, AL042542, AI142139, AL043019, AL042984, AL042551, AL043003, AL119464, AL119488, AL117339, AB026436, AR054110, A81671, AR060234, AR066494, AR069079, U27699</p>
1971	HBIJF90	886505	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1120 of SEQ ID NO:1971, b is an integer of 15 to 1134, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1971, and where b is greater than or equal to a + 14.</p>	<p>AI291206, AI692352, AI159669, AA166774, W87878, H60270, R00390, AI174957, AA082398, AA047213, AI567717, N58610, AA384188, AA344124, AI970562, AI572002, AI860354, AA035047, N26366, AA382178, R21443, AA649513, AA294966, AA393451, AW372027, AW383791, N79097, AW176696, AA579377, AW383795, AW363037, AW372042, AW372015, AI887591, AW383956, AI590368, AA489105, AW379471, H72198, W57920, AA989009, AA286892, AW363951, AA047214, AW372040, AA459578, AW383793, AW383800, AA092369, AW383794, AW364575, AW383786, AC004686, AF161410</p>
1972	HWLFB44	886527	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 437 of</p>	<p>AI688604, AI660552, AI659950, AW296326, AW291582, AI700219, AI380340, AW004785, AW295479, AW006764, AI688540, AA522452, AA594441, AI695451, AA470898, AA594533, AI581787, AI581803, AI581880, AI832419</p>

1968	HCQBD35	885484	<p>than or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 1424 of SEQ ID NO:1968, <math>b</math> is an integer of 15 to 1438, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:1968, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	AA056059, N55045, AI016561, AL035552, Z82975, AC004388, AC004993, AC010722, AC006924, AL033397, AL022151, Z84720, AL109654, AC005145, AL136297, AC004081, AL121823, AC007458, AP000493, AC005053, Z93403, L11910, Z72001, AC004911, AC002071, AL121654, Z99497, AL109758, AL133244, AL034377, AC002524, AC004998, AC002367, AL049588, AC006041, AL022164, AL031650, AL117667, Z83848, AC003080, AC005250
1969	HLQFI67	885511	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 509 of SEQ ID NO:1969, <math>b</math> is an integer of 15 to 523, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:1969, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	R08489, AI683117, AA724056, AI571789, AA489761, AW341505, AI590115, AI884695, AI651965, AI863337, AI028587, AI246696, AI920847, R76087, AI032590, AA835680, AA508647, AA765513, AI791278, H51121, AI568523, AA034147, AA513202, AA053714, T99214, AI821534, Z82198, Z82201, AC008014, AC005296, AL031782, AL133512, Z74696, AC008498, L81800, AC003871, AC002209, Z98744, AC003695, AC004559, AP001117, AC004616, AC004836, AC005069, AC004068, AL049648, U69569, AC006325, AC006256, AC007126, AC004106, AF093117, AL049828, AL023806, AC002078, Z72004, AL049734, AC005066, AC006406, AL023582, AC006368, Z70288, AL133246, AC008080, AF165175, AC007370, AC005539, AC007461, AC005738, AL023579, AL022477, AL035684, AL022576, AC002526, AC007542, AL132800, AF165176, AL078598, AC008126, AC008072, AF064860, AL031681, AC007385, AC005232, AC004885, AC007103, AC005157, AE000660, AC004063, AC003046, AL035686, AC007016, AL078602, AL109612, AL117355, U85197, AJ010598, AL135746, AC006143, AC006032, AL035667, AP000243,



				A02710, E12615, AR035193, E14304, A07700, A13392, A13393, A27396, AR027100, I28266, I21869, A49045, E16678, E16636, A82653, A93016, D28584, I25027, I26929, I44515, I26928, I26930, I26927, A58525, A70040, A51384, AR038762, I49890, I44516, AF156296, AR000006, A58526, A91753, I00079, E16590, AF156294, AJ244005, AJ230933, A91965, A67220, Y11923, AR027069, A20701, A04710, Y11926, A52326, A15078, I00074, I03665, I03664, D88984, U87250, I66495, I66494, I66498, I66497, I66496, I66486, I66487, E00523, AR038286, I25041, I92483, I00077, AR008430, AF156303, AR028564, AR060673, AR060676, A49428, A08457, A08458, AF156299, I07429, A13038, A29289, X13220, D14548, D34614, A00782, A02741, A14595, A18755, A25856, I12245, A49695, A49696, A97221, AF019720, AF156302, S70644, A18722, AF156304, A91754, M32676, AB012117, AF096810, E06034, I69350, S65373, X58217, AR064706, I68636, A60957, I40851, I84554, I84553, A60968, A60983, Y11449, AF096793, AR066482, A60985, A60990, A60987, D44443, X15418, AB007195, Y17188, A10363, AF130655, X73003, I08250, X16234, E04616, I03663, I03666, I18302, S83538, Y11447, AR063812, I07888, Y11920 AA433834, AA427986, W38581, AA362763, AA331674, W05306, AA029735, AA331672, W93893, H46399, AI672548, AI637672, AA025077, R26502
1967	HTPHK88	885476	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1208 of SEQ ID NO:1967, b is an integer of 15 to 1222, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1967, and where b is greater</p>	

	AL036229, AL039076, AL037742, D80366, AL043868, AW392670, AL038509, AL039077, AL119457, AL119324, AI142134, AL042544, C75259, AW451416, AL119443, AL119399, AL038520, AW384394, AW372827, AW363220, AL119497, AL119319, AL119355, AL119483, AL119363, U46349, AL119391, AL119484, C14389, U46341, U46350, AL119522, AL119418, U46351, AL119341, AL119335, AL039504, AL039555, AL039521, AL119396, AL039476, AL043586, AL044412, AL044364, U46346, AL119496, U46347, AL119444, AL036836, AL043011, D59889, AL037205, AL119439, AL042984, AL119464, AL134527, AL134538, AL042614, AL042965, AL042975, AL043029, U46345, Z96142, V00745, X73004, AR036903, E13740, I19517, A76773, A22413, I13349, A11245, A35536, A35537, A02135, A02136, A10361, A04663, A04664, I08051, AF118808, I01992, A92636, E03165, E02221, E01614, E13364, X68127, A95051, AR062871, AR031374, A49700, AR031375, A58521, AR020969, AR025207, AR017907, AR036905, A38214, A44171, I56772, I95540, AR018924, A63067, A51047, A63064, AR018923, A48774, A63072, A48775, AR068507, AR068506, AR015960, AR000007, AR015961, A85477, AR035975, AJ244003, AJ244004, AR035974, AR035977, A85396, AR035976, AR035978, A25909, A98767, I19516, A93963, A93964, I63120, A02712, I60241, I60242, A95052, AR043602, AR043603, AR043601, A95117, A18053, I06859, A18050, A23334, A75888, I70384, A60111, A23633, AR007512, A23998, A84772, A84776, A84773, A84775, AR062872, A84774, AR062873, AR067731, AR037157, AR067732, A86792, A58522, A91750, AR054109, A64081, A20702, A43189, A43188, A20700, I18371, A92133, A58524, A58523, A24783, A24782, A81878, I03343, AR022240, A97211,

1966	HCRMX54	885350	<p>correspond to the positions of nucleotide residues shown in SEQ ID NO:1965, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1956 of SEQ ID NO:1966, b is an integer of 15 to 1970, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1966, and where b is greater than or equal to a + 14.</p>	<p>AL038837, AL037051, AL039074, AL039128, AL039109, AL039108, AL039659, AL039156, AL045337, AL039625, AL039648, AL039629, AL039678, AL042909, AL040992, AL039564, AL038531, AL037726, AL045353, AL036973, AL044407, AL039410, AL039423, AL039538, AL039386, AL044530, AL039566, AL039509, AL036725, AL045341, AL039150, AL036196, AL037639, AL038025, AL039924, AL036767, AL037615, AL038821, AL036117, AL036238, AL043441, AL045794, AL039085, T24119, T24112, AL036679, AW013814, AL043445, AL043422, AL037526, AL037027, AL037601, AL043423, AL036924, AL036964, AL036158, AL036765, H00069, AL036268, AL036733, AL037177, AL037054, AL036418, T23947, AL036998, T02921, AL036133, AW451070, AL037643, AL036132, AL037082, AL038851, AL036167, AL036163, AL037178, AL037049, AL037085, AL036190, AL037600, AL036914, AL036139, AL037047, AI535983, AL037124, AI535783, AL037021, AL036191, AW452756, Z99396, AL044960, AL036152, R47228, AL036900, D51250, AL036150, AL036227, AL048425, AL036207, AL036174, AL036953, AL036719, AL037679, T23659, D80253, AL036858, AL037077, AL036808, D59787, AL038043, AL037569, D80043, D59275, D80219, T48598, AA514190, Z25782, AL038447, D80227, AW450376, D80240, D80134, AA631969, AL037002, D51423, T11051, AL036999, D80210, Z25783, D59619, H00072, AL037016, C14227, AL037094, AL036630, D80193, D80196, AW135155, D80168, AL039440, D59927, AI557751,</p>
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1963	HICROM43	884379	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 787 of SEQ ID NO:1963, b is an integer of 15 to 801, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1963, and where b is greater than or equal to a + 14.</p>	<p>AI954282, R79858, D31597, R77935, AA280996, H99307, AA020014, R27081, AI950631, AA295264, AA402581, AA093272, AA093324, AA248050, AI221843, N47215, AL080111, AR044142, AR044127</p> <p>AW374334, AI064813, T31706, T08905, R94666, T09212, T31698, T83796, AA714176, T27030, AI655004, AW239098, AF196972</p>
1964	HLWCF60	884529	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1612 of SEQ ID NO:1964, b is an integer of 15 to 1626, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1964, and where b is greater than or equal to a + 14.</p>	<p>AI083497, H14688, N77514, AW015613, H16869, AA377154, AW194949, AA378912, AW390260, H24407, AA307120, W39491, F25064, AA252725, AI539349, AA252714, H17215, AA136412, AA076537, AA076506, R57305, H06942, AA488566, AF151908</p>
1965	HWLKD85	884719	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 576 of SEQ ID NO:1965, b is an integer of 15 to 590, where both a and b</p>	<p>AA282838, AA121115, AA323118, AI351856, AA325395, AA248006, AB028859, AJ250137</p>

1961	HSIFV30	884168	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1706 of SEQ ID NO:1960, b is an integer of 15 to 1720, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1960, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2840 of SEQ ID NO:1961, b is an integer of 15 to 2854, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1961, and where b is greater than or equal to a + 14.</p>	<p>AI803484, R78080, AI129966, AI925109, AI804159, AA279212, AA410910, AA678827, AI860837, AI183591, AW316983, AI431314, AA766602, AA081236, AW194027, AI521521, Z38832, AA588351, AI923638, N39554, R22273, AA447188, AA769352, T52102, AA371263, AA259257, T60532, AW411209, R22218, Z42670, AA443811, AA969814, AA729654, AA259256, AI969030, AW409826, R24524</p>
1961	HSIFV30	884168	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2840 of SEQ ID NO:1961, b is an integer of 15 to 2854, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1961, and where b is greater than or equal to a + 14.</p>	<p>AI660957, AW361534, AW361532, AI802756, AW361521, AW361520, AW009763, AI660234, AI802693, AW361523, AI721275, AA581198, AW361522, AW361528, AA296955, AI721121, AA508854, AA297150, AW009764, D25727, AI687981, AI582072, AF127036, AF039400, AF095584, AB017156, AF039401, I95746</p>
1962	HNTSY52	884215	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 4073 of SEQ ID NO:1962, b is an integer of 15 to 4087, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1962, and where b is greater than or equal to a + 14.</p>	<p>AI815240, AI631739, AA309645, AI696961, AI479235, AA307961, AI978872, AW195761, AA280818, AI990440, AW262762, AI809185, AI037930, AI637988, AI754009, AA181165, AA972531, AI817057, AI494056, AW073248, AA181166, AI826853, AI361369, AI149286, AI752584, W52618, AW339206, AW075435, AA115631, AI445241, AI523220, M62298, AA558913, AW368570, N51760, AA348679, AI735744, AW384980, AW384967, AI802541, Z19223, N35007, N74118, H03102, AA102848, Z25028, AI624448, AI279412, AI476071, AA385867, AA095022, AW194583, AI383593, AA360919, R79669, Z28444, AA506352, R26853, AA133388, AA330074, N30413, Z28730, AA020013,</p>

1958	HHEHB82	884038	<p>nucleotide residues shown in SEQ ID NO:1957, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1743 of SEQ ID NO:1958, b is an integer of 15 to 1757, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1958, and where b is greater than or equal to a + 14.</p>	<p>AI676130, AI991800, AI936232, AA307685, W67860, AI640485, AI628790, AA524353, AI824956, AI990762, AI800990, AI335005, N31143, N21294, AW152627, AW302169, AW002644, N21128, AI333331, AA994852, AA983846, AA595031, AI420382, AA610108, N90992, AW071591, AI240604, AA678009, N31229, AI264921, AI655233, AI611678, R70013, AA579237, AW015641, T64746, T31944, AA570191, AA084445, AA935035, C15927, AA358195, AA081627, T07826, N94623, T34036, Z44938, AA380035, AA579517, R58098, Z44410, N69498, D60023, D52558, AW373952, AW369584, R70058, AW089404, AW373174, AW373195, W23822, Z41687, T83793, T32675, W67803, AI566308, H98950, F03903, AA358196, AI360228, AA129234, AA913439, AA094862, AA129262, AF151882, Z85996, D16898, AF090992</p>
1959	HE2PR08	884095	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2842 of SEQ ID NO:1959, b is an integer of 15 to 2856, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1959, and where b is greater than or equal to a + 14.</p>	<p>Z78394, AA579630, AA582960, AI885325, AI936536, AI041202, AA224518, AA524291, AA224554, AW408821, AW089837, AA846846, AI039992, AI201511, AI798847, AA582557, AI863290, AW387178, AI809936, AW173427, AI808766, AA824622, AA769229, AA884837, AA314430, AI243818, R80863, AA736387, AI167988, T77889, AI830058, AA868007, AA280913, AA808467, T03578, AW192356, H70647, AI264722, AA53758, AA854986, R80862, AA323841, H91024, AW050796, AI086287, T77712, AI912397, AW17749, AW173596, AA653386, AW438592, AA349239, AI277285, AI648701, AA330244, AI120761, Z78395, T47786, W38742, T47820, AA634686, AA091136</p>
1960	HMKAN71	884161	<p>Preferably excluded from the present invention are one or more</p>	<p>AI635715, AW411210, AI624534, AA879465, AW104990, AW409582, AI766309, AA081177,</p>

1955	HOGCJ47	883799	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1115 of SEQ ID NO:1955, b is an integer of 15 to 1129, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1955, and where b is greater than or equal to a + 14.</p>	<p>AW054994, F33829, AI560717, AI268302, AW005178, F22745, AA284546, AW296592, AI298213, AI356840, AI493477, F36987, AI081004, AI038823, AI633219, T66954, T36169, W71988, Z39991, H50924, AA284816, F09164, AA043299, T31835, M78780, AA745562, H16657, AW262658, AA745578, AA744099, AI349099, AA989269, R72575, H51586, AA744396, T79883, W76380, H16514, H38527, AA995198, AA296888, AA541441, F11503, AI475083, AI302606, AA043300, AA886838, R54219, AI125823, T66953, AA745444, AW361009, AA296951, F03443, AA297044, AA335686, F05047, R37601, AA090754, AI970619, Z44304, AW374215, AI547101, R51823, AA783044, AA594940, AW176749, AA583598, T15585, R49122, AA085248, AF131774</p>
1956	HWLUT61	883945	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 265 of SEQ ID NO:1956, b is an integer of 15 to 279, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1956, and where b is greater than or equal to a + 14.</p>	<p>AI942421, AA588562, AI942402, AI520886, AI867203, AA995170, AA045481, AW380270, AI680440, AI362487, AI591163, R82350, AI934005, AW089784, C04722, AA046708, AI690012, AA016994, AI274637, AI872632, D19775, AI985406, AL049685, AL049792, AF093744</p>
1957	HLTBA42	883971	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 909 of SEQ ID NO:1957, b is an integer of 15 to 923, where both a and b correspond to the positions of</p>	<p>AI767559, AI631820, AI758931, AI758389, AW118708, AA630485, AA761469, AW195693, T89742, AA807177, AA361233, AI679708, AI244041, AI572549, AA947977, AI679134</p>

	AI077453, AI304526, AI272752, AI283882, AA149402, AI346977, AI345971, AI281170, AA568902, AI274915, H27350, AI262634, AI217716, AW000877, AW374541, AI818196, AI738744, AI285000, AI348231, AI274936, AI263949, AI347005, AW242694, AI280854, AI970403, AI273369, AI346999, AI304778, AI739069, AA574044, AI186095, AW167644, AI346193, AI688345, AI346941, AI346989, AI281121, AW043573, AA149303, AW024983, AI280872, AI274189, AI915133, H44304, AI318406, AI272747, AI273217, AA427468, AA574043, AI277124, AI669863, AI245933, AI246742, AI262266, AI873728, AI688346, AA633341, AA864657, AI318388, AW016561, AI672959, AA434269, R12121, AI262441, AA506660, AW299999, AI290431, AI274388, AI312741, AW027199, AW044256, R36883, AI741229, H93844, AI955566, AA506754, AI537131, N72688, H13937, AI346220, AI394296, H27324, AI222762, AI280169, AW374650, AI272760, AW237322, AA916675, AI262447, AA923527, AW136052, AA492265, AB000712, D88492, AB000714, AF007189, AF095905, AJ011656, AC004643, M74067, AJ130941, AJ249735, E13998, AL049423, AL133655, U30290, AR005195, AL133607, AL133084, AL133070, AL133053, AL133051, AL133049, AL133076, AL133608, D87953, AL122101, AL133015, AL133057, AF002985, AR055519, AR015970, AR034821, AF114168, AL122049, AF126531, AC004213, AF057300, AF057299, AF031147, Y17957, Y14735, X70685, AF052110, X72624, T96099, R05961, R05962, R48403, R50075, R50076, W21446, AA430665, AA492185, AA505980, AA563652, AA595940, AA622827, AA863314, AA886772, AA284679, AA293130, AA293763, D25752, T24860, AI540462



		<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1762 of SEQ ID NO:1954, b is an integer of 15 to 1776, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1954, and where b is greater than or equal to a + 14.</p>	<p>AI859845, AI991311, AA522795, AI081052, AA535079, AI400364, AI335984, AW193221, AW170345, AA622540, AI273767, AW168283, AI188508, AA565989, AI559433, AI420481, AI246782, AI928146, AA157892, AA314960, AI281336, AW194453, AA838633, AA844471, AI401064, AI949231, AI911649, AI268908, AI874198, AI186144, AI819846, AI276313, AI874344, AI963847, AW193220, AI863584, AW167101, AW168206, AA149417, W79089, AA506616, AI564546, AL036495, AA434123, AI560666, AA149738, W02467, AA948146, C06165, AI660464, AW167111, AI961910, AI343369, AW194388, AI567796, AW009339, AA434059, AI739607, AI280032, R48300, AA551656, AW167849, AI346572, AI923100, AI005290, AI091394, H93341, AA295491, AI588982, AI819915, AI950029, AI991855, AI347074, AI347076, AI660868, AW374558, AI682624, AI348165, AI949885, AI347071, AW014104, AA582757, AI860565, AI222884, AI861959, AI283186, AI347501, AI305833, AI031766, AI346386, AI346944, AW189088, AI032425, AI283162, AI347072, H27323, AI214245, AI346606, AI743195, AW015201, AI347060, AI346569, AW275383, AI281140, AI346475, AI743978, AI274133, AI738882, AI273374, AI347930, AI738627, AI991114, AI097004, AI144005, AI304544, AA569935, AI281141, U46417, AA157596, AI274318, AI285074, AI346274, AI336454, AI346908, AW374542, AI339875, AI014860, AA293207, AI339827, AI861957, AI281257, AI243957, AI281300, AI336446, AI660830, AI347929, AI368165, AA477634, AA411444, AI343934, AI636236, AI274312, AI424819, AW024873, AI337303, AI339815, AI470046, AI690641, AI284953, AI284985,</p>
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			present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 455 of SEQ ID NO:1951, b is an integer of 15 to 469, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1951, and where b is greater than or equal to a + 14.	
1952	HIBCE91	883254	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 741 of SEQ ID NO:1952, b is an integer of 15 to 755, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1952, and where b is greater than or equal to a + 14.	W00425, AA349641, N42533, AI557558, AI557559, AW360991, R12333, AI557560, 246216, AI890540, AA448602, N56299, AW103800, AC003007, AC005632
1953	HWLKF77	883371	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1008 of SEQ ID NO:1953, b is an integer of 15 to 1022, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1953, and where b is greater than or equal to a + 14.	AI478843, AA628092, AI816845, AI813678, AW269372, AI310217, AI742137, AI887196, AA722779, AA740417, AI363399, H94805, H95343, AA890712, AA643210, AI743293, AI362725, AI391652, AA410876, AI474205, AI261631, AI280434, AI832281, AW001746, AA449475, AI459617, AW152661, W32215, H61131, AI190504, AI282582, AI872611, W32179, AA449638, AI345648, AI271086, AI473071, AJ245719
1954	HOGCA75	883753	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1008 of SEQ ID NO:1953, b is an integer of 15 to 1022, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1953, and where b is greater than or equal to a + 14.	AA523290, AA700004, AI927220, AW170580, W74492,

1949	HCRNZ31	882762	<p>than or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 2140 of SEQ ID NO:1949, <math>b</math> is an integer of 15 to 2154, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:1949, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	<p>AW388071, AW388070, AW392828, AW170095, AI139114, AA130783, AI796575, AI582280, AW392825, AW392827, AI032971, AW388090, AI160038, AI631539, AI205291, AA143796, AI342617, AA086002, AI076563, AA550819, AW388098, AA086109, AI374885, AW392810, AA669949, AI146898, H99988, AA186384, AW392819, AA303484, AI335908, AI917197, AI094414, W32500, F02983, H77763, AA371674, D58760, AW131074, AA148180, AW392820, AA148700, AA130888, R72708, AA412284, AW363332, H77594, AA470006, AW079549, AA224383, AA151480, AA303341, R00959, AA150531, F04202, D59193, AA099042, R00958, AA650273, R43795, AI571527, AA151983, AA583490, F04991, W02164, AA303931, AA098988, AA149391, T28556, T17080, AW135027, AA148701, AA747401, AW406447, AI479148, N28704, AW021399, W01939, AW270652, AA601667, AL042054, N71729, T60887, X64123, Z98036, AC004231, AC005971, AC02558, AF129756, AC005514, AC005527, AL022316, AC003980, AC007014, AL133245, AL117344, AC003950, AC004233, AP000229</p>
1950	HWMBU8 9	883172	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 638 of SEQ ID NO:1950, <math>b</math> is an integer of 15 to 652, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:1950, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	<p>AA368362, T52098, R69052, R27072, AA397783, AA393589, T95399, AA912955, AW137196, AA155762, AA188555</p>
1951	HUFBY15	883201	<p>Preferably excluded from the</p>	<p>AA625286, AA303053, AA303052, AA297581</p>

1947	HMEKW4 4	882715	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1993 of SEQ ID NO:1947, b is an integer of 15 to 2007, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1947, and where b is greater than or equal to a + 14.</p>	AL049779, AP000313, AC009802, AC004467, AF110520, Z47556, AC007542, AC002487, AP000194, AP001116, AL136363, AC004967, AL035684, AF034569 AA553612, AA813301, Z36965, D61366, AI216671, Z21245, AW152524, AI339525, AA483108, AI114701, AI720301, AI375684, AI066646, AI755202, AA584876, AA057530, AI341571, AW130427, AA584862, AW068996, AA569586, AW069783, AA679937, Z86040, AC007385, AL031230, AC009247, AB020874, AL049546, AL079304, AL021397, AL035078, AC004890, AC004990, AC007103, AC003009, AC004804, AL024498, AC004263, AC005844, AL034375, AC005723, U91326, AC005409, AL049539, AC006241, AC009509, AC007842, AC006430, AL031296, AC005086, AC010205, AL023578, AC007528, AC006377, AC005081, AC004070, U62293, AL021395, AC005368, AC005155, Z82214, AL133243, Z68276, AC006509, AC005229, AL133245, AC004087, AL031684, AP000141, AC004821, AP000500, AC006478, Z93017, AC008372, AC004859, AC004125, AC006229, AC006525, Z78022, AL022576, AC004796, AL035249, AC005181, AC004028, AP001137, Z85986, AF045448, D87675, AL049696, AF001549, AC005670, U91318, AC005483, AR036572, U91328, AL049713, AC005180 AI563939, AW250591, AA280100, AA148046, AI167949, AI160019, AA886389, AI679948, AI523219, AA147993, W94919, AI679440, AA307127, AA480164, N26434, R54543, AA064644, H08047, AI520745, H99329, R60593, R60646, AA064686, AA283759, AA280033, R54445, AA303581, H07940, W91972, H69540, AI250356, AA283994, R11288, AI085856, N70908, R11229, AI540673, AA809976, AA909579, AA775556
1948	HCEDM42	882729	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1236 of SEQ ID NO:1948, b is an integer of 15 to 1250, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1948, and where b is greater</p>	

	AC006120, AC005743, AE000658, AC004807, AL034406, AL132994, X06328, AL121754, Z85987, AC004888, AC003971, Z97987, AF091512, X07200, AC006387, AC004126, AJ006996, AC006525, AL033533, AC007528, AC003684, AC006328, AJ003147, AP000208, AP000130, X15051, AC005599, AC006112, AC006333, AP000247, AL023653, U62317, X15052, AL022333, AC002543, AC004934, AF139987, AL096816, AC004029, AC005855, U82668, AP000952, AF229844, Z82203, AP000039, AC016025, U66059, AC004032, AF125314, AC000116, AC003694, AC005172, AC005277, AC011331, AC006370, Z86062, AP000104, AC005772, AC004033, AC005878, AL033518, AL009047, AC007277, AL031010, AL024509, AC006285, AC005701, AC008080, AF131205, AL023513, Z99916, AC007425, AL121657, AC002080, AC000115, AC009069, AL031655, AC000105, AC005881, AF130248, AC006368, AL080272, Z82244, AL031228, AC009396, AC007115, AC011013, AC005386, AC007899, AP000961, AF109719, AF107256, AC006445, AC002331, AL049692, AC007993, AF064858, AP000081, AC002109, AL049866, AC006945, AC005184, AC006013, AC004125, AC007314, AC005303, AC002528, AL133448, AC007359, AC004859, AC007878, AC005189, AL008721, AL035458, AC005938, AL031776, AC004466, AF196972, AC005752, AL049838, AP000402, AL109827, Z98748, AL109627, AC004910, Z82201, AC008175, AL034412, AC005960, AC005553, AC004848, AL049631, AP000697, AC004217, AC008984, AC006042, AC006989, AF212831, Z97054, AF027865, AC006382, AC008033, AC006966, AC007344, AF060568, AF044743, Z97353, AF130357, AL050307, AF107257, AC006398, AC005216, AL132641, AC002368, U91323, AB010266, AL023582, AL034549, AC007917,

		NO:1946, and where b is greater than or equal to a + 14.	AI284328, AI803101, AW440273, AA603344, AW148392, AA453747, H80554, AA453828, AA528253, W80573, AI254217, AW183037, AI419419, AI423034, AI305512, H65206, AA989137, AI559284, AI659077, AI935032, AW304485, AI611561, AA483217, AW440223, AI073889, T57089, AL046966, AI144070, AA962018, AA112330, AA630098, AI419982, AA954260, W93927, AW173728, R28013, AA146651, AI583416, AA668673, AA191610, F34079, AA703680, AA568394, AI053711, AW270496, AA069314, AI357477, AL041838, W02028, AA706521, AA664331, H89224, AW085628, AI207861, AI253208, AI744801, AW014689, AI769492, AI251385, AW271017, AI971131, AI053588, F34082, AI493025, AI252712, AA931216, AI991553, AI053773, AI311753, AI174685, T92433, N53462, AI805022, AA679798, AI252858, AI053963, AW086339, AA888155, AL135273, AI792443, AA083383, W92523, AI400721, AA504865, AW262442, AA789229, AI250275, AA011377, AI251700, AI254684, AI244896, AW134612, AW052205, AC011456, AC004605, AF050157, AL109654, AC005919, AC004062, U52112, AF030001, AC006289, AL132774, AL049636, AC006115, AC003949, AP000518, AL023584, AJ133269, AL078630, AL035663, AF054504, AC006239, AP000338, AL031056, AC004914, AP000216, AC002467, AC005060, AC007688, AC004638, AF130342, AF084363, AF107258, AC003976, AC004551, AC002072, AC005619, AP000080, X79283, AF126403, AC003061, AC005972, AF095725, AC005921, AF052041, AL049780, AC004051, AC016026, AC005304, AF109905, AC007707, AF111103, AC005580, AL031864, AC006039, AC005740, AL022401, AC003107, AC006012, AC003664, AC006371, AC005587, AL031737, AF001549, AP000014, U85195, AC002470,
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1945	HWMBI22	881221	15 to 2786, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1944, and where b is greater than or equal to a + 14.	AA613822, N64732, AA405775, AA196964, AA367635, AA373433, W88918, AA504065, AA652295, N91745, T79620, AA996002, F25128, AI364464, AA515314, AA394253, AA078918, AI909748, AA455284, N80334, AL044772, AA377702, AA742682, AI583136, AI907986, AI909746, AA146721, T79705, AI798856, AW177744, AA037697, H55648, AA767252, AA810554, AA814521, AI675619, AI872260, AW370721, R32993, D78805, D78848, AW078800, AW082532, AW020164, AI245304, AI688854, AI492648, AL096741, AC004882, AC005529, Z82171
1945	HWMBI22	881221	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1469 of SEQ ID NO:1945, b is an integer of 15 to 1483, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1945, and where b is greater than or equal to a + 14.	AI800907, AI949684, AI052333, AW131568, AA732570, AA769120, AI743959, AI436302, AW082175, AW273742, AI677956, AA037263, AA885367, AA761521, AI936106, AI433128, AI292313, AI458263, AI687626, AI378687, AI187910, AI289598, AI378924, AI224510, AI808484, AA890001, AI363454, AW340276, AI077398, AI168640, W89211, W88447, AI566016, AL043030, AA836573, AA768422, AA634503, AI141297, AI539216, AA918633, AI350946, AA825685, AA515491, AA994089, AA609078, AA761310, AI628981, AI206686, AW105192, AA776321, AA676705, AI676082, AA363995, D62240, AI094091, AI300249, AI400742, T98450, AI809452, N75907, U66469, U66471
1946	HETDL42	882330	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1573 of SEQ ID NO:1946, b is an integer of 15 to 1587, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID	AI344189, AI693945, N91690, AI457192, AW150901, AI798181, AA503831, AI458569, W86357, W86242, N92074, T79381, W86600, AI915320, W90710, R94236, AI282976, R94333, AA470366, T55160, H47818, T79811, W01906, N71011, AI702229, T54994, AA336878, N68860, AI613011, AI733775, T61655, AA120932, AA579769, H24026, AW170681, AI611475, AI243696, AI523317, T90991, AW148344, AA345280, AI908519, AI051595, AA885499, W80464, AA917596, AI380135, N29558, AI667394, AA250763,

		SEQ ID NO:1943, b is an integer of 15 to 1222, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1943, and where b is greater than or equal to a + 14.	AA868655, AA542925, AI375014, AA934763, AI128632, AI340141, AW118892, N92840, AI240209, AI348244, AA706829, N25202, AI346077, AI342321, AI748952, AI857321, AW002059, AA553675, AI052791, AA127847, AA814658, AI041906, AA983612, AI609301, AA994633, AW006650, AI400295, AA729483, AI459183, AA903651, AI800091, AI561215, H09610, AW088630, AI683272, AI753574, AI719306, AI359224, AI278762, T32229, AI819003, AI093341, D11489, AI342601, AW300745, AI374975, AI346938, AI183409, AI423782, AA126006, AA612604, AA161217, AA846503, AI284860, AI275160, N80744, H06158, AA844576, W16677, AI310420, AI539128, AA996156, AA046578, AA737921, AI985064, W04601, N58366, AI827968, AA719050, N26915, AI091923, AI262701, AA524456, AI674584, AA873274, AI698929, AA485290, AA292533, R99586, AI079471, AA806662, AI361287, T81787, AI370853, W31500, AW193899, AI082289, AI805446, AA583430, T58149, H17502, F30305, AA594759, W25066, AW248136, AA195893, N77735, T95072, F30309, AA482356, AA657742, AA284405, AW059835, AW103745, T95167, R35655, T82102, AI370689, AA485295, T23459, AW366963, AA564661, T63086, W40151, AA484058, AW001568, AA642325, AA126112, AA296692, W01205, AA305476, N36073, AA192315, AA911901, N79525, AI784438, AW073849, AA913441, AA534551, T24804, AI074360, AW193751, H90230, AF112213, AL050318, S83364, AA689442
1944	HEOQC11	881219	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2772 of SEQ ID NO:1944, b is an integer of



1942	HSDXB50	881104	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 735 of SEQ ID NO:1942, b is an integer of 15 to 749, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1942, and where b is greater than or equal to a + 14.</p>	<p>AI537427, AA400660, H82428, Z40015, HI8502, AL044808, F04916, R98833, AI474154, AI478281, AI934138, T96021, AA133024, Z43958, AI679684, T54446, AA371002, AL045017, R68119, T16415, AW271181, AA403235, AA676809, T70487, AA626926, R37695, F02870, H51082, R97530, AW389296, AA247471, AI932299, AW376391, Z44495, AW371130, R82536, AI933296, AL044806, AL043245, AI672519, AI133627, D87438</p>
1943	HFKMJ24	881105	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1208 of</p>	<p>AI816760, AI346903, AI189171, AI860301, AA284405, AI340328, AA485290, AW028742, AW073309, AI539128, AI749857, AA910895, N77735, AI805446, AI422690, AA868655, AA046578, AI038920, T32229, AI936194, AA742438, AW001568, AA657742, AW170086, W25066, AA296692, AI077505, AI375014, T95167, AI126547, W16677, AI370853, AI348244, N36073, N26915, AI346077, AI748952, T63086, AI432379, AA127847, AW073849, W01205, AI082289, W31500, N74204, AI753574, AI093341, AI278762, T82102, AI246120, AI735203, AW059835, AA877544, AA706829, AI129303, AI361287, AW249798, AA594759, AA524456, AA542925, AI240209, AA126112, AA934763, AI342601, AI052791, AI857321, AI128632, AI340141, AW118892, N25202, AA814658, AI041906, D11489, AA485295, AW002059, AI370689, AA553675, AA729483, W40151, AA482356, AA903651, AA994633, AI609301, AI459183, AA195893, AW088630, AI561215, AI800091, AW248136, AL050318, AF112213, S83364</p>
			<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1208 of</p>	<p>AA742438, AI346903, AW170086, AI816760, AI189171, AI432379, AI860301, AI340328, AW028742, AW073309, AI422690, AA161296, AI126547, AI749857, N74204, AA910895, AI129303, AI038920, AI246120, AI936194, AI077505, AW249798, AA877544, AI735203, AA926687,</p>

1941	HOAAHS2	881074	<p>than or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2717 of SEQ ID NO:1941, b is an integer of 15 to 2731, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1941, and where b is greater than or equal to <math>a + 14</math>.</p>	<p>AI300924, AI873826, N41871, AB020657, AF161553, AJ012449, AL078644, AR018872, AL137640</p> <p>AI638708, AW370588, AA604391, AI638200, AL046090, AI052244, AW055067, AW055206, AA224549, AW375847, AI679109, AL042378, AI621228, AW055056, AI633697, AW131512, AI858264, AI652500, AA418385, AW007559, AI347910, AA633193, AI417517, AA418455, AL039518, AI379655, AI735776, AI580118, AI611056, AI767569, AI332364, AW006925, AA431974, AI566498, AA458620, AI333573, R93775, AA633310, AI804397, AW190968, AI304495, AW025852, AI077447, AI278898, AA854076, AA400042, AI081935, H48411, AI061256, AI346015, AI042287, AI200205, AI298915, AI150973, AI400748, AA705014, AI921341, AI206630, AA258351, AI493294, AA418302, W80672, AI378534, AI367993, W80671, AI093517, AI445930, AI307183, AA467763, AA418344, AA401498, AI267890, AI953454, AI271612, N72284, AA937447, AA469431, AI361498, AI208143, AA725419, AA296397, AA507583, AA150850, AI207267, AA865832, H18576, AI056172, W60546, H13134, AI754190, AW338131, AA227538, AI569024, R69127, AA911897, AI028185, N73581, R80599, N91387, H63197, AA232897, AI640853, AA150542, Z43515, AI358148, AA921728, N67115, AA132871, AI288107, AA400712, AA742907, R80307, AI290519, AI952567, R11774, R68082, H60801, H60800, R69246, T67909, T64951, AI868438, T32394, AA936201, AI537951, AW235108, AA232896, N70399, AA342399, T69432, H82789, AA360349, AI263563, H63112, AA937988, R80600, AI580686, AA857394, AI678572, H18469, W04986, AA321926, AA610546, H57599, R80203, R91273, H57600, T68057, H82690, N75387, AA852406, AL039517, T52512, AL043057, R93722, N76405,</p>
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		SEQ ID NO:1939, b is an integer of 15 to 756, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1939, and where b is greater than or equal to a + 14.	AI240036, AI560812, AI300180, AI089271, H54573, AA505078, AA701943, AA232733, T90553, R94479, H38643, AW026456, AA768615, AA854918, T86974, W96085, R08289, R94069, H60026, AI685154, AA970179, AA885640, AW261910, AI283256, AW028863, AA883234, N80142, D52425, AA865830, N22716, AA906638, AA95348, AA282083, H95085, AA765503, AI240974, AA738193, AI207741, AA443008, N35116, H54683, AW128861, N23206, AA364712, AA402136, H96792, AI906874, AI025840, AI346239, D59957, H24210, H95663, N20084, H38653, N29785, H94256, AA063258, AI359626, H96607, N90414, T56966, R20754, AA384679, AI027068, AI370536, AI520954, T78586, R20753, D60276, AI362623, D80608, R54942, AI962075, 228499, H53597, H18631, H91182, H48906, AA427748, AA301182, AI985444, AA972097, AA894582, AA609747, AI804799, D59884, AA492083, H54445, H67369, T27025, H96239, N79026, AA761468, AA972438, AA970691, AA235389, AA236543, AA815412, AA427749, F10605, H73921, AI923477, H61736, R89812, AI205301, AA247535, H69003, C01267, N56269, AI371632, AI345661, AA203698, AI252251, H96773, AI609846, AI349670, AA319076, N83178, AB018288
1940	HTEEZ62	881052	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1870 of SEQ ID NO:1940, b is an integer of 15 to 1884, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1940, and where b is greater

1937	HE8SB64	880747	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2414 of SEQ ID NO:1937, b is an integer of 15 to 2428, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1937, and where b is greater than or equal to a + 14.</p>	<p>N79251, AW271218, AA908394, AI214414, R51941, W31353, AI669222, T32309, AI572502, T34020, AA456077, T30416, AA477701, AA477700, AA989005, N22935, W93445, AA026749, AA166984, T08224, AA883332, AA033670, AA255572, W03768, W31880, AB001740, AB012865, AB012727</p> <p>AI378788, AW070902, AI435602, AW138866, AA147037, AW383889, AI417256, AI420312, AW383890, AI565996, AI499115, AW383902, N21309, AA147128, AI767271, AA885289, AI750960, AI276772, AW102917, N46066, AI290500, H99543, AI302412, AI246663, AL046164, AI242761, N31244, AA233072, AA225024, H84766, H80004, H99544, M91216, H80005, H85099, AA226631, AI436734, AA460989, D29810</p>
1938	HKAEN78	880927	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 908 of SEQ ID NO:1938, b is an integer of 15 to 922, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1938, and where b is greater than or equal to a + 14.</p>	<p>AA306924, T73855, T83294, T85637</p>
1939	HOSML44	880994	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 742 of</p>	<p>AA402002, AA522719, AA905625, AI091612, AI418276, AI560743, AW130435, AI992293, AI800639, AI204546, AA858118, AA813011, AI291876, AI703226, AW051814, AA846821, W19987, AI362691, AI356940, AI149942, AW008254, N55455, T79403, AI221349, AA975506, W96084, AW020847,</p>

			<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1316 of SEQ ID NO:1935, b is an integer of 15 to 1330, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1935, and where b is greater than or equal to a + 14.</p>	<p>AF072813, W01018, AA992009, AA325639, W19986, AA776635, T30663, T33734, AI878939, AA256403, D54700, AA405294, AA134519, Z43583, AA2227076, F06381, AW204252, AA430244, AA938909, H30186, D58629, R52851, N98255, AA161199, AA100159, AA114264, H43926, R22746, R34517, AA2333577, AA081447, AA324916, AW138505, AA157365, AA324268, H84964, AA019377, AA232373, H42692, W28863, N83234, AA233594, R17978, W81009, W99386, T34516, T35956, AA214355, AA324917, N42109, AA078753, AA010322, T32868, AW138540, AA094192, T32010, T31224, Z39649, T87432, R22276, AA359082, H46389, R99404, T10889, H39131, R16493, AA227062, AA984677, T05775, AI755053, AA362885, AA354497, AA918044, T34825, AA417901, AA134510, AA643681, AA579642, T34772, AI147468, AI336174, AW374188, H19354, AA357382, N55823, AA482456, AW273035, AA161200, AI911850, AW363734, AA430035, AA663961, AA707053, AA565772, AI276668, AA575906, AW337856, AA033587, AA256297, AI308794, AA587048, AI354787, R99312, AA626391, AF119297, AF059524, AR028523, AF059529, AF059525, AF059527, AF059526, U25265, AF059528</p>
1936	HHENW13	880694	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 664 of SEQ ID NO:1936, b is an integer of 15 to 678, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1936, and where b is greater than or equal to a + 14.</p>	<p>AI937291, AI991002, AW087339, AA464410, W37647, AI342395, AA237069, AA581972, AA594539, AW204762, AW276040, AI125339, AA167314, AI367075, AI803380, AA313202, AI264016, AA236870, AW167731, AI083960, AI991293, AI038896, AW205414, AI460022, AA694199, AI610383, AI707649, AI277698, R53610, AA305224, AW079550, AA430117, AA577381, AI074864, N23143, AA860618, AI801446, AA134966, AA724229, W32042, AI151318, W16866, R50528, R55254, AA135047, AA255556, AI189581, N32722, AA455580, AI244226, AL040668, W37383, AA844913, W93357, R50622,</p>

1933	HLSAA96	880418	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1783 of SEQ ID NO:1933, b is an integer of 15 to 1797, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1933, and where b is greater than or equal to a + 14.</p>	<p>AI783651, AA953781, AA291501, AA668861, AA029999, AA649486, AA652093, AW132021, AA662005, AA364232, AI654194, N55669, AA883709, AA143334, AA372265, AA026564, N78458, AI472423, AA026472, AA313840, N55383, AF112214, DI7244, DI17071, AA706862</p> <p>AA429586, AW444874, AI920970, AA604806, AA431746, AA651708, AA847822, AA746501, AI051249, AI005487, AI368709, AI417856, AA009824, H06206, AW150601, H08319, AA830175, AA809393, AA765426, AW337780, AI435979, AA421703, AA508643, AA282694, H06207, T78170, R44287, R59778, AW768684, AI193720, AW235814, AA993048, R61320, T09292, AA503026, AA301325, AW084853, H08221, T84812, T78009, AA340198, AA009714, R23537, AI933451, AA649008, AA322332, AC004890</p>
1934	HBBMA61	880578	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 323 of SEQ ID NO:1934, b is an integer of 15 to 337, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1934, and where b is greater than or equal to a + 14.</p>	<p>AA934705, AI370920, AI744886, W86237, AA609163, AI082256, AI140436, N53361, AA968467, AI216727, N62199, AI143325, AI015198, AW236133, AA732867, AW341974, AI591092, AI141509, AA002163, N36129, R45071, R07479, Z38172, AA059224, T33713, AI469204, D11576, D11575, Z78385, N64142, T31044, AW243169, AA844013, AA417247, AL119457, AW392670, AL119324, AL119443, U46351, AL119497, U46350, AL119483, AL119319, U46347, AL119399, AL119484, AL119391, AL119418, Z99396, AL134531, AW372827, AW384394, AW363220, AL134533, AL119363, AL119355, U46349, AL119522, U46341, AL119439, AL119444, AL134538, AL119341, AL037205, AL119401, U46346, AL119335, AL119396, AL119496, AL134920, U46345, AF090190, AB026436, AR060234, AR066494, AR054110, A81671, AR069079</p> <p>AA984117, AW163623, AA311680, AA418057, AI144311, AL120308, AA056148, AA187561,</p>
1935	HE8QG48	880649	<p>Preferably excluded from the present invention are one or more</p>	

1932	HCHOB95	880074	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1112 of SEQ ID NO:1932, b is an integer of 15 to 1126, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1932, and where b is greater than or equal to a + 14.</p>	AA147111, AA148916, AW361440, AA482318, AI224997, AW361449, T92156, AA295139, AI932801, D45563, AI933650, AW351860, AI361188, AA588527, AW388036, AW382525, AW382549, AA078254, AA077989, AA078672, AA078071, H25470, N43950, H85417, AI990093, H82389, AI262918, N27467, H83634, N27592, AA653768, W20391, AA481039, AC007688, AC004467, M60322, X52046, AL049610, AL008706, Z83745, AF084363, AF109905, AC003061, U56708, AL050318, M96253, AF035927, X92380, U59932, AF010237, Y17262, Y17265, U79975, U70436, AC002073, AF120983, AC005855, U69273 AA919098, AI829915, AI373763, AI769890, AI678073, AI186242, AI040323, AI096782, AW182824, AA877237, AI184171, AA843884, AA496249, AI684689, AA402540, W72754, AA099242, AA461621, AI688056, AA469089, AA476703, AA044210, AI312919, AA430750, AW340236, AI129433, AI332742, AI088802, AI203956, AA577035, AI375761, AI335585, AA862361, AA044080, AI658509, AA433943, AA991263, AA461447, AI658499, AI027869, AI222302, AI376235, AA496250, AI271959, N40335, AI806274, AA449309, AI808707, AA933843, AI184973, AA029128, AA287518, AI445857, AA316127, AI300822, N34296, AA206029, AI275858, AA133156, AI086991, AA973014, AA494516, AI146496, AI351577, AA524704, AA972426, W49681, AA143280, AA156594, AA989508, AA744580, AW296210, N27520, AA148505, AA523848, N50728, AA150804, W77953, AA099144, W49680, AA770602, N91132, N62734, R77333, W20508, AA150700, N50625, AA442714, AA910801, AA917918, AI027396, AI218157, AA927254, AI240835, AA804816, AA143389, AA321494, AA639009, AI971188, AA373176, N55054, AA604424, AA860473, AI915977, AA665452,
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1930	HCRNM29	879886	<p>SEQ ID NO:1929, b is an integer of 15 to 1283, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1929, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 748 of SEQ ID NO:1930, b is an integer of 15 to 762, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1930, and where b is greater than or equal to a + 14.</p>	<p>AA360902, AA279306, AA370803, AC004677, AL078630</p> <p>AA040621, R64534, AA811265, AI582161, AA132065, AI222332, AA040620, AW001618, N40203, AI796277</p>
1931	HTPAM76	880071	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1619 of SEQ ID NO:1931, b is an integer of 15 to 1633, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1931, and where b is greater than or equal to a + 14.</p>	<p>AW387764, AW387814, AW387802, AW387787, AW387847, AI888586, AW387804, AA156240, AA156243, AA115637, AW388637, AW387768, AW073692, AW387860, AI828610, AA447697, AW078652, AA156747, AW387867, AA115638, AW387851, AA147510, AW387845, AA147381, AI671236, AA627367, AI302358, AW387765, AI589344, AA126967, AW194339, AA552339, AW274844, AA115437, AA631614, AA482223, AI336522, AI610638, AA464766, AA127119, AA148915, AI801445, AI888444, AA486631, AA481927, AI926413, AW058286, AA468787, AA156919, AI888332, AA115436, AW387859, AA129137, AA911832, AA480064, AW387887, AI446210, AA129136, AI935846, T93584, AW338675, AA486537, AA447849, AA373191, AI739001, AI536744, AA300698, AI926870, T79051, AW378720, T70156, AW387878, AW150592, AI805203, AI678275,</p>



1928	HCRNW08	879595	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 407 of SEQ ID NO:1928, b is an integer of 15 to 421, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1928, and where b is greater than or equal to a + 14.</p>	<p>AI025266, AI434099, AA533047, AW272720, AI801054, AI888914, AI735767, AW304001, AI445913, AI436796, AW190856, AI921153, AI380637, AI888294, AI634717, AI075324, AI815198, AI805627, AI932444, AW073291, AI891014, AA425142, AA622524, H67122, AI916480, AI146786, AA316874, AI678847, AA315049, AI817063, AA573742, AW152548, AW151674, AI610106, AI675865, AW152169, AI675714, AW027843, AI475938, AI685830, AA582017, AI473626, AW381550, AI445130, AI800451, AI800431, AI972701, AI678427, AI801784, AI582452, AI867585, AI972499, AI720013, AI278406, AI277266, AI082505, AW191880, AI537173, AI473553, AI925030, AI559391, AI471336, AF053641, U33286, AF038452, AF053642, AF053650, AF053651, AF038451, AF053640, AF007791, AF088867, AA570120</p>
1929	HNTDJ29	879661	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1269 of</p>	<p>AA192153</p> <p>AA555115, AW083142, AW383992, AI819977, AI818981, AW302146, AI357211, AA970333, AA565308, AW391496, AA809752, AA043134, C18608, AA548230, AA565317, AI352620, AA554155, AA279358, AW392424, AA043611, AI433904, AA767874, AA370804, F33509, AW370978, AI500136,</p>

		<p>the general formula of a-b, where a is any integer between 1 to 2296 of SEQ ID NO:1927, b is an integer of 15 to 2310, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1927, and where b is greater than or equal to a + 14.</p>	AA459274, AA236997, AI587101, AA946837, AI922323, AI198839, AA568602, AA777025, AW376909, AI127770, AI139373, AI753243, AA789258, N95643, AI754062, AA236574, AI140786, C75603, AA075484, AA251521, AA587266, AW439362, AI121103, AA213367, AA837311, AI187231, AA227539, AI344110, H67810, W95535, AI400951, T65536, AA872668, AI192986, C17463, AI859211, AA470471, T17222, AW192135, AA075621, AA506763, AW139044, AI913866, AA192466, AA165156, AI826398, AA678954, AI271344, AA113939, C05669, AA137249, H17790, F11801, AA164768, C75565, R89384, T16445, T69722, N66040, C18698, H59003, AA503343, AA339152, AI025443, D81644, R78076, H58956, D60375, F06655, H58600, AA514607, H02142, AA164700, AA055768, AA306967, T70379, AI568159, C21496, W95420, H68082, AI572235, AA382754, AA989472, T35523, H02038, T65602, AA236620, AW363691, AA142866, R01641, F09450, AA524392, T85647, Z39669, H17791, H58601, AA382619, T84903, AW303874, AA365866, T97378, AA165228, AA838767, AA165229, R42323, AI025112, AW029182, AA865982, T91320, C00668, T99684, T82109, T39127, AA471242, R16395, T67084, Z21083, T39128, R42337, AW390645, R01549, H77482, R16380, AA937248, AA199583, AA528463, T97267, AW005487, AA586445, AA084485, U90736, AA934719, AA327356, T87388, AI826239, AA137250, AW385433, AW385409, Z20096, AI924498, AA513297, AW080588, AA558986, AI926128, AI581525, AI695291, AW196067, AI783818, AI623264, AI400863, AA526975, AI445127, AI469613, AI933636, AI919084, AA632103, AA581848, AI888732, AI358508, AI469656, AI291994, AI275085, AI249798, AA552670, AA565996, AI040152, AI242802, AA884931, AI378691.

1926	HHFJJ61	879386	<p>the general formula of a-b, where a is any integer between 1 to 3897 of SEQ ID NO:1925, b is an integer of 15 to 3911, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1925, and where b is greater than or equal to a + 14.</p>	<p>AI088798, AI123932, AI348513, AA916423, AI346237, AI697840, AI346773, AI827270, AI763317, AI763320, AA609447, AA024428, AA948406, AW149724, AI435604, AA946618, AI950301, AW149541, R36320, AI923233, AI860454, AI814488, AA232203, H43798, AW374530, F11803, F06514, AW131707, AI285224, AA457235, R88044, AW013905, H23601, N51357, AA568172, Z43390, AA758706, AI927091, Z39461, AA936791, H23640, H43806, AA364902, AI802791, AA864755, T33777, F02788, H42258, F09452, AA583801, T65604, R43369, T65538, H40427, AA336254, W94547, AA416590, R44402, N56604, AW004746, R19614, AA580399, W78003, AA463368, AW293983, AW374487, AA513346, N29649, AA837760, AA024429, AI695172, R17652, AW448962, AA232743, AA973192, AA652557, AA463872, AA327631, AA470625, R49252, AA773793, AA351733, W79462, AA757309, X85664, AA480653, R65673, AA719939, X85665, AI972788, AI972806, AA933622, AA916725, AW006745, AL137343</p>
1926	HHFJJ61	879386	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1027 of SEQ ID NO:1926, b is an integer of 15 to 1041, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1926, and where b is greater than or equal to a + 14.</p>	<p>R93802, AA130402, H07960, AW250644, H85944, R85969, AA95215, AA036855, AA215398, AA308813, AW250378, AA324032, AF161516, AF152097</p>
1927	H2CAA49	879484	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by</p>	<p>AI279876, AI539769, AA876127, AI963800, AA206425, AI969470, AI951966, AA459503, AA778294, AA639198, AA446426, AI334209, AI150191, AI281280, AW149760, AA446118,</p>

1923	HILBF77	878931	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 711 of SEQ ID NO:1923, b is an integer of 15 to 725, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1923, and where b is greater than or equal to a + 14.</p>	<p>AA862706, AI802643, AA848160, AI026832, AI523217, AA342697, AI241878, H60591, AI709179, T25879, R12857, AA970902, AA719848, N63253, T69962, T79010, AI676163, T69912, T16724, AA093662, T24661, H20652, AW270806, AA337850, AA349447, AA595861, AA373966, AA355685, N84238, AA199620, AA090164, AI557186, D31885, AE000658, U85195, AF223953, AF172088</p> <p>AW242021, AA352298, AA330358, Z78381, C01470, AL049923</p>
1924	HTEHX05	879009	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2213 of SEQ ID NO:1924, b is an integer of 15 to 2227, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1924, and where b is greater than or equal to a + 14.</p>	<p>AI872206, AI912340, AI758821, AW337178, AW004890, AI572080, AW058001, AA775261, AA831357, AW074361, AI361820, D20022, AI982775, AA581345, AI690445, AI917776, AA825538, AI360561, AW439592, AI798286, AI140796, AI277190, AA100279, AA485257, AA835492, AI522238, AI015234, AI689240, AI469550, AA706811, AI744762, AW265061, AI884872, AW450726, AA122332, T34498, AI811224, AI355770, AI702026, AI471817, AA092467, AI597962, AI624976, AI681670, AA089786, AA654171, AF035606, U58773</p>
1925	HPHAA47	879234	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by</p>	<p>AI540230, AI453545, AI697681, AW170551, AI346427, AI819403, AI857677, AI348016, AW131500, AI419533, AW027758, AW016071, AI089921, AI347957, AA612573, AI601101,</p>

1922	HTWEA61	878917	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1978 of SEQ ID NO:1922, b is an integer of 15 to 1992, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1922, and where b is greater than or equal to a + 14.</p>	<p>AI758833, AA836349, C14291, AA902529, C14302, C14277, D59495, R10732, N93792, AI032107, AA655646, R12861, AA384438, AA682859, AI904934, AI904935, D80004</p> <p>AI826538, AI267318, AI688542, AI052104, AI376453, AI818589, AW029328, AI678648, AW192514, AI566340, AI972077, AI811155, AI936746, AI089502, AI372947, AI004230, AI354532, AI119666, AI084362, AI027083, AI691080, AA621070, AI744332, AI149953, AI149949, AI150745, AI199180, AI625208, AI003733, W20002, AW074007, AI627187, AW242075, AW130451, AI014764, AI091649, AA041468, W55944, AI445868, AW151070, AI005484, AI092273, AA040575, AI689545, AI524423, AI521587, AA908191, AI689268, AI270577, AI372494, AI619883, AI538583, AW263138, AA040673, AI368864, AW316596, AI539834, AI952557, AA721376, R19495, AA662403, AW085967, T75472, AA808860, N78681, N32970, AA176087, AI125767, AA740389, AI074758, AA300365, AW090571, AA894651, AI372493, AI680268, AI547225, F13229, AA383093, AA814692, AA386145, AA970611, AA302328, AI536066, D31244, Z44196, H20558, T48533, AI350433, AW243606, AI784415, AA063203, D82747, W26208, AA471277, AA903068, AI680414, AL038664, AA664940, AA897635, AI535982, D31438, AI419708, AW275741, AA386197, R62151, AI051237, R62259, W28043, R39290, AI250661, F10830, AI695489, AA343846, R43842, AA334321, AA093703, D56184, AA845417, AA332748, Z40172, D80027, R38429, AI524545, AA095572, W15187, T28780, T27330, F24108, AI611841, AA176086, AW375368, AI521566, AA323934, AW163010, AW292131, AW021288, AA329440, D81428, AA344329, AA039822, AW375337, AW270647, AW149580, F35697, AA148318,</p>
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1920	HWHGF46	878800	than or equal to $a + 14$ .	AA205608, AA284538, AA411196, AA410243, AA411096, AA436335, AA478263, AA478319, AA609270, AA628990, Z19827, AA719345, AA769770, AA776741, AI018379, D19640, AI305530, AI307824, AI344950, AI349732, AI363496, AI368551, AI434470, AI561271, AI498585, AI423077, AI147393, AI167340, AI224833, AI174303, AI187983, AI659839
			Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2101 of SEQ ID NO:1920, b is an integer of 15 to 2115, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1920, and where b is greater than or equal to $a + 14$ .	AA814195, AI457718, AI085388, AI765650, AA633558, AI379449, AI476182, AI419034, AI037888, AI148797, AA028963, AW009541, AW051402, W67841, AA687642, AA934498, AI079438, W67782, AA035136, AI016426, AI304821, AA085457, AI808210, AA098932, AI685969, W39585, AI685970, AI038819, AI219571, AI580447, AA485877, AA487780, W42434, AA594455, AI865081, AI085147, AI202241, AA632996, AA035135, D45612, AA991990, AC006261, AL031985, AL021154, AC006449, AL008718, Z35329, AC004950, AC002349, AL031846, AF146367
1921	HPMSF50	878909	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 3939 of SEQ ID NO:1921, b is an integer of 15 to 3953, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1921, and where b is greater than or equal to $a + 14$ .	AL045860, N58437, AI525982, AI688578, AA007479, AA310929, AA906018, N41678, AW084721, N59420, AA007400, AA234496, AI810048, AI394367, AW273848, AI400139, AI659487, AI168584, AW247506, AW245091, AA232997, AW148684, AA235036, AW242278, AA236538, AA206161, N78027, AA630558, AI128065, N76782, AW297277, AA497021, AA877580, AA931472, AA351722, AA232945, AI208004, AA885392, N71533, H09450, AA554688, AA983994, AI221004, AA235204, H54147, AA460203, AA985683, AI681824, N22166, AA889639, AA668373, H81138, AA678603, R97728, AW291709, AI346634, AA337087, T56721, C14300, AA310347, AA359522, AI032752, AA705700, R68352, R10225, C14263, T40018, H81043, T56722, C14304, R68562, AI369399, R96796, AA333514, AA459932, H57429,

			15 to 1819, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1918, and where b is greater than or equal to a + 14.	AA701379, F06989, AA148617, AW044004, R21296, R44866, AA191290, AA172201, AI970448, AW361154, AI627401, N42449, AI224491, AA635934, R14008, H05119, R18980, T26664, T16725, F07496, T59139, AA372447, AA092086, F31653, Z40099, AW271655, AA993655, R32993, R46141, AI472512, T59062, T26665, Z40560, R32717, AA148756, AA374317, AA585413, AA064920, AI917682, AA625242, R32994, AW362703, AW372891, AW386147, R25109, R25628, R63578, AA828475, R31750, AI468622, AI491710, AI540458, AI814841, AI570152, AW079699, AI499285, AA836253, R40363, AI688854, AI696714, AI954475, AI689096, H03560, AI368579, AI357049, AI560184, AI469505, AI687295, AA767252, AI890654, AI280732, AW083750, AI445877, AA923096, AI341690, AI888575, AI697178, AI765469, AW075921, R30844, AI702494, AI359787, AI417754, AW104141, AI867017, AA742592, AI688959, AA741502, AA765659, AW193231, AI633330, AI679261, AI498288, AI890995, AW235487, AI749231, AA761557, AI589140, AI590785, AI623980, AI590755, AC005216, U56252, AF102578, AF038847, U67810, A85213, AB015752, AF047716, AL137490, AC006314, Z73979, AP000299, AF039907, AL049552
1919	HCEYN60	878560	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 563 of SEQ ID NO:1919, b is an integer of 15 to 577, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1919, and where b is greater</p>	AI828920, AI866163, AI581670, AF108139, AF015770, U94350, T46897, R40801, R49803, R49845, R40801, R78750, R79059, R81613, H13785, H13786, H26105, H49579, H49658, H61321, H61596, H62359, N23682, AA002170, AA039225, AA045879, AA045878, AA053472, AA083358, AA146754, AA171927, AA173260, AA181967, AA186968, AA215430, AA215576, AA494375, AA554350, AA565187, AA582635, AA594327, AA612625, AA878313, AA886926, AA887637, AA908475, AA939096, AI051140, AI083860, AA641276,

1917	HTPAY82	878433	correspond to the positions of nucleotide residues shown in SEQ ID NO:1916, and where b is greater than or equal to a + 14.	AA211303, R51407, AA040271, A1128507, A1824743, A1520729, AA279532, N62195, AA770032, A1991817, W67473, AA309583, AW392599, AA976795, R14643, AA976594, A1216760, AA442972, R53567, AA369897, A1364305, T56013, AW021133, AA016204, R53679, AA620855, H73568, A1521207, AA554353, AA209214, AA369896, A1832743, AA609475, A1536106, W67474, A1672267, AA563648, A1824485, A1561042, AA040252, A1383108, AA579428, AA305720, T91394, T04986, R45624, T86544, R29736, C00010, T29665, T05066, AA887773, A1985106, T85482, AW243484, N76492, AA720874, AA573214, A125103, AW021569, AA305679, L25798, X66435, AL079334, AL050004, L00334, L00330
1917	HTPAY82	878433	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 544 of SEQ ID NO:1917, b is an integer of 15 to 558, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1917, and where b is greater than or equal to a + 14.	A1078580, A1743235, AA429945, W93646, AA455042, A1128804, A1826623, AA516431, A1989747, AW183193, A1141284, A1989739, AA702011, AA911088, AA989129, AA876539, AA477156, AA305052, W19506, N89912, A1265924, AA644621, W38899, W52820, A1633679, AA987264, A1263261, A1371387, A1349474, AA805723, T90569, N95062, W93906, A1198595, AA946978, A1419292, A1198127, AA778301, A1631831, A1352478, A1693357, AA927461, T97984, AA341602, AA035640, AA356704, AA338760, AA295467, A1933253, AA374253, AL044098, A1206661, AA780176, R02479, A1123118, AA338761, AA234074, T98061, T83106, AA193255, AA479657, AF104628, A1220255, A1857454, AF096895, AF057306, AF135380, AF135381, AF145216
1918	HMUBQ39	878436	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1805 of SEQ ID NO:1918, b is an integer of	AW084650, AA088424, A1697069, AA172042, AA838417, AA172044, A1744623, A1627227, A1630224, AA993207, A1371167, A1949142, A1890821, AA609797, A1018761, AW372890, A1814927, AA625264, A1954856, AA993191, AA614086, H05584, A1961696, R39132, A1632376, A1143462, AW136636, AA722935, AA172197, D20763,



1914	HDTHI51	878274	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 494 of SEQ ID NO:1914, b is an integer of 15 to 508, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1914, and where b is greater than or equal to a + 14.</p>	<p>U18012, AA045933, AA128223, N72395, AA058726, AI834324, N86927, AA356189, AW351942, AA349355, W04179, AF203978, U34879, U43607, U43548</p>
1915	HRGDE77	878374	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2871 of SEQ ID NO:1915, b is an integer of 15 to 2885, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1915, and where b is greater than or equal to a + 14.</p>	<p>AL041566, AA477266, AI656936, AI951716, AI096374, AA477267, AI927648, AA292231, AA479878, AA922034, AI718425, AW340634, AA699300, AA443588, AI141913, AI150393, AI262030, AA824471, AA399440, AA427523, AA12642, AA293470, AA723836, AA994091, AA575922, W76034, AI985377, H49237, AW016407, AA143496, AI660111, R20962, AA873844, AA143497, R06788, AA808474, T79352, Z45236, F04128, R01824, AA503842, AI361214, T79783, AI918933, T39691, W72847, AW079858, AA987751, R00061, AA430714, AI424488, F08632, AA293015, H49238, F01790, AI873138, AW235170, AA693978, AW407497, AA548157, R06739, AA343968, AA227223, AA421387, AW082809, AI867963, R01094, AI823640, R42744, AW050670, AA226870, AB033010, AL137675</p>
1916	HHFHR53	878403	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2994 of SEQ ID NO:1916, b is an integer of 15 to 3008, where both a and b</p>	<p>AL048840, AI064902, AW249691, AI872413, AW243294, AL138300, AI590076, AA100757, AW004004, AI923006, AA587051, AA279533, AW183520, AI419833, AW292319, AA214039, AI078293, AI082751, AI015661, AW167064, AA427783, AW117731, AW169146, AA070150, AW088356, AI336423, AI803586, AA100821, AL048839, AW105007, AA332665, AW021472, W93478,</p>

<p>SEQ ID NO:1913, b is an integer of 15 to 1975, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1913, and where b is greater than or equal to a + 14.</p>	<p>AI636042, AW375181, AW365198, AI813938, AI769135, AI074596, AA418593, AW178083, AI498407, AI654773, AW351962, AW177876, AI366827, AW178077, AW020441, AA806382, AW178182, AW178076, AW178081, AW177879, AW365184, AW366023, AW365168, AW375184, AA418655, AW177839, AW178084, AI468009, AI433820, AI692309, AW082896, AI927777, AW365192, AW387262, AI143953, AW365194, AA421501, AI271676, AA425855, AA854439, AW082902, AW177842, AW128928, AI392856, AW365398, AA421470, AW365185, AA535678, AI400413, AW365353, AW387278, AA680114, AI076707, AI285336, AW365392, AI581008, AW375185, AA938196, AI801859, AW089786, AI382040, AW365381, AW365201, AW375183, AI243492, AA973630, AL120271, AA649053, AW365405, AI698558, AA934487, AW366025, R98908, AI473267, H70023, AA976681, AW365408, AA806629, AW375120, AI536915, AW178078, AW365180, AW365183, AW003830, AW178085, AA400106, AA532939, H59432, AA719249, W85961, AW387263, H58724, AI301165, AW294007, AA463549, AA527345, AW262369, AI830518, AA832369, AI383837, AI216813, AA280430, AW177877, AW365189, AW177079, AI288375, AW375133, AA515868, AW375160, AW243710, AW375442, R98681, AA932395, AW169226, AA188895, AI335817, AW365411, AW365146, AW365417, AW382189, AW365202, AW382124, W24191, AI635752, AI868465, AA280348, AW365182, R97677, AW365412, H56644, W72745, AW177846, AW365404, AW365402, AW365359, AA424055, AW177974, AW365164, N91771, AW365193, AW351813, W85877, D20462, AW365388, AW375179, AW375130, R84876, AW365362, C01884, AW351560, AW375422, AW365364, AW366058, AA936703, AC008040</p>

		<p>is any integer between 1 to 1704 of SEQ ID NO:1912, b is an integer of 15 to 1718, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1912, and where b is greater than or equal to a + 14.</p>	AA417376, AI689262, AA081418, AI611368, R83304, N99927, AW272715, AI281824, AA680361, AI278647, AW022859, AW268970, AI273221, AW264836, AW022729, AI184566, AA416981, AW020287, R52791, AI247775, AI924151, AI669435, AI093813, AI206016, AA888936, AW027977, AI269409, AW027941, AW250197, AI334129, AI474405, N34475, AA351606, AA435915, AI270365, AW022849, AA650241, AA629813, AA594133, AI358262, AA972239, N63595, AI538989, AI075918, AI431608, AI094322, AI868462, AA454579, AW379850, AW005549, AI088724, AI240714, AI421046, AI493454, H81794, AI348002, AI935462, AI702637, AA730245, AI982825, T06003, AI338374, AA173157, AI767408, AA417194, AA493371, AI688358, AW167434, AI688521, AI961941, AW269290, AA351839, AA024843, AA319841, AA675922, N57835, AA464275, AA491623, AI263242, AA812261, AI566133, AA527515, AA478734, AI700650, AA527428, AI393134, AI359837, AI591187, AA352936, AA364692, AW167540, F09704, AI432014, AI241621, AI768245, AA380399, AI739437, R95684, AI248967, T66281, AA516011, AI919046, T98208, AA582002, AA747622, AI523723, AI348587, AI904291, R83399, AI784373, H29486, R94431, AA256650, N42879, AI032060, AI887086, AA235236, T98967, AI056747, AA306667, AA768239, W38780, T98209, AA642247, AI554380, AW302197, AI816825, AI766194, AW207784, AW376043, C02058, AI033452, AC000378, AB019038, Z66003, Z66002, Z65575	
1913	HE2HC14	878238	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1961 of</p>	AI127452, AW351965, AW351958, AW178075, AW351966, AW351967, AW351961, AW177978, AI659805, AW351960, AA772145, AI336994, AW178080, AI332356, AW340996, AW177836, AW178082, AW178086, AI703194, AW178079, AW177841, AA102622, AW136469, AI476336,

1911	HWLQL72	878199	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 540 of SEQ ID NO:1911, b is an integer of 15 to 554, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1911, and where b is greater than or equal to a + 14.</p>	<p>AL039390, AI567953, AI446495, AI863014, AI671642, AI890907, AI866581, AI889148, AI285439, AI431307, AI539771, AI804505, AI554827, AI866461, AI815150, AI273179, AI371251, AI866510, AI285419, AI923046, AL047422, AW151136, AI866691, AI924051, AA715307, AI432644, AA809974, AI828583, AI569439, AI872315, AI624545, AL042365, AA641818, AI648567, AL049776, Z99943, U50823, L13297, U01145, Y17793, AL122110, U00763, AF097996, AL133080, AL133607, AL122049, AF113694, AL133053, U31501, AL133049, AF093119, X62840, AL133655, AL050116, I17767, AL133015, AL133608, AL133072, AL137267, U30290, AL122101, E13998, AF002985, AL133081, AL133077, AL137283, A30543, I19505, U96138, AL122103, E07361, S71381, E12888, AL133084, AL133070, AF132676, AL049423, AF061836, M30514, Y07915, AR034821, AR034830, I96214</p>
1912	HBJUL05	878207	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 540 of SEQ ID NO:1911, b is an integer of 15 to 554, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1911, and where b is greater than or equal to a + 14.</p>	<p>W95797, AI815614, AA159571, AA001628, N47368, AI143890, AA485201, H27837, AA385921, T96878, AA382884, AA384878, W95754, H18148</p>
				<p>AI802901, AI889514, AA464368, AW026514, AI278645, AA315349, AA777364, AI741517, AW139143, N93194, AA632076, AA700910, AA456473, AI889524, AI160031, AA464386, AA464702, AI089651, AI057409, AI271327, AI921322,</p>

1910	HTELO87	877881	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1253 of SEQ ID NO:1910, b is an integer of 15 to 1267, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1910, and where b is greater than or equal to a + 14.</p>	<p>C21487, AW440198, AA482137, AI971218, H66403, AA570041, AA555150, AA494063, H78365, AA935511, AI807280, Z21231, AA019783, H78462, AA632718, AI338489, Z19788, W01156, AA016261, N28787, AF151877, AF1113127, AL117550, AF161526, A74434</p> <p>AA115605, AI589156, AA115471, AI359615, AA115213, AI817096, N50090, AW118065, AI024233, AA423826, AA610042, AI672797, AA307285, AI800760, AA989046, AA975271, W60559, AA463414, AW162429, N50523, AA034218, AA805237, AA115129, AA721969, AA498544, N52970, AA419084, AA708005, AI741973, AI204382, AA476516, R70914, R70913, AA043558, AA320866, AA476416, AA033534, AA781036, AI627278, AA903019, AA347354, AA035548, D25909, AA043557, AI419107, AI080319, H97516, C21455, N50579, AW299563, AA310893, AA307286, AI761872, AA035038, AA905739, AA746181, AI521292, AI554821, AI433157, AI889189, AI866469, AI815232, AW086285, AI927233, AI366900, AI539707, AI355779, AI590043, AI440239, AI537677, AI494201, AI500659, AI539800, AI865465, AI801325, AI500523, AI538850, AI702065, AI582932, AI923989, AI872423, AI284517, AI500706, AI491776, AI445237, AW151138, AI521560, AI500662, AW172723, AI284509, AI440263, AI538885, AI889168, AI866573, AI828574, AI633493, AI434256, AI434242, AI805769, AI888661, AI648454, AI284513, AI888118, AI859991, AI436429, AI887775, AI889147, AI581033, AI371228, AI567702, AI440252, AI866786, AI610557, AI860003, AI242736, AI887499, AI539781, AI500714, AI559957, AI491710, AI521571, AI582912, AI623736, AW089557, AW151974, AW151979, AI612913, AI885949, AI371265, AL045500, AI469775,</p>
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1907	HCRQK59	877411	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1537 of SEQ ID NO:1907, b is an integer of 15 to 1551, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1907, and where b is greater than or equal to a + 14.</p>	<p>AI394016, AI337333, AW008484, AI492226, AA503225, AI832480, AA551754, AW263863, AA782573, AA469071, AI700423, AI380990, AI631409, W95477, AI651800, AA804581, AW016198, AI567909, W05729, AW338263, AA488420, AW134932, AW149688, AI424300, AI569012, AA348345, W95367, N74885, Z20694, AI569356, AW083000, AA745423, AW193135, T24482, AI355870, R65920, AW054656, A75401</p>
1908	HWLXK44	877437	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 454 of SEQ ID NO:1908, b is an integer of 15 to 468, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1908, and where b is greater than or equal to a + 14.</p>	<p>H53943, R09272, W52643, AW001226, AI827422, AI086839, AI752330, AI752329, H53944, AL136295, U94831</p>
1909	HE8DZ94	877630	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1785 of SEQ ID NO:1909, b is an integer of 15 to 1799, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1909, and where b is greater than or equal to a + 14.</p>	<p>AI684587, AA610052, AI189791, AI186697, AI751250, AI310126, AI188971, AA906201, AA019739, AW264561, AW009062, AI361312, AA887119, AA971980, AI580662, AA088862, AI261311, AA575958, AA018414, AI268976, AA904689, AI784506, AI654089, AA838000, AI800634, AA018103, AA833673, AA809439, AA970480, AI419770, AW189948, AI806808, N40196, AA886637, H38658, AA059058, AA809455, AA532665, AI538082, AA887381, T50287, AI083552, T47520, AA054140, H86494, AA469072, AI933491, AA935534, AA634291, N58823, AI799084, H86061, R24685,</p>

	AA331327, M11718, Y14690, X04758, L02918, AJ224880, M10956, J03051, Y11587, AL050138, AL049466, AF115392, U77594, A65341, AL110296, AF090903, D83032, AF106862, AL133062, AF047716, U49434, E02349, AL137550, AF137367, AF078844, AL117463, AL133014, I89947, X80340, S77771, Z97214, AR038854, S78453, AB025103, AF044323, U78525, AF113019, AL080159, AJ242859, AL050024, E03348, AF100931, E03349, A18777, S36676, AL049382, AL137558, S83440, AL133619, AL110280, E15582, AL137463, I48978, E04233, AL080154, A08913, AL050116, AL137555, AL137480, AJ005690, AL137476, A08907, A08912, AL137256, A08910, S78214, AF067790, I89931, A08909, X99257, AF061981, D16301, AL117435, I49625, AF016628, X82434, A08908, U53505, AL133624, AL080150, S76508, AL080163, AL080124, Z13966, I89934, AL050277, AL050170, E02152, AF169154, AL133640, AL050172, AB007812, U35846, AL133565, A08911, AC002467, AL133665, X79812, I03321, E06743, AL133075, AL049452, AF113699, E01614, E13364, X70685, AF017437, U67958, AL122106, U58996, AL117585, AL023657, AF199027, AL137548, AL133113, AL133568, AF113689, AL117587, AF176651, AL137574, AF058921, I09499, AL117440, U91329, AL050092, AL133010, AR034821, E02221, A03736, AL137292, I68732, X53587, A08916, AL137526, AL133054, AF145233, X66871, X87582, AL137530, AF200464, AL117578, AF199509, AF185576, AL117629, S69510, AF055917, AF159615, A18788, AF162270, A15345, I79595, AF002985, AF126247, AL049300, A65340, U92068, AL133558, AL137459, AF106697, AL133557, E01314, T63108, R27886, H13204, H88165, H88165, N64280, N76100, AA461456, AA594297, N87869, AA091436, AA095583, AI086998, T03859, T24745, AI128830, AI537635

	AW372817, AI446310, AW074603, AI075140, AW291469, AI214470, N89578, AW069514, AW385351, AI753788, AW372828, AI752198, AI052797, AA099729, N42734, W02000, AW372820, AI160542, AI095555, AI754231, AA070970, AW302579, AA114947, AI357733, AW386363, AI864906, AW340511, AI268892, AW393341, AA505831, AW073493, AI750527, AA305175, AI200515, AI342335, AI751983, AI417127, AA993150, R77205, AA137193, AI935300, AW393329, AI560062, AI077562, N75508, W93869, AI127162, AI582477, AA573183, AA857098, AA442665, AW385366, AW068212, AW393339, AW393324, W87515, AI751004, AI039775, R95826, AA040410, N68613, AI752199, AA150616, AI919268, AW372823, W87487, AW393333, AW088208, N43019, R95777, W30698, AW393343, AI671130, AI094661, R69515, AA330038, AA705256, AA096062, AW393334, W24174, AW393342, AA334999, AA974667, N99050, AW068455, AI147454, H87987, W05395, AI865506, D62061, AA578679, AA329445, AW372121, AW393330, H59312, AA122386, D62992, AA449381, AA330407, AI589497, AA142904, H45011, AI382841, AW385329, AI688861, R86097, H13571, H44959, AI932553, R09536, AA332101, H03527, AW393338, AW235794, T27809, H03445, T49493, AW444479, AA115948, AA853107, AA099728, AA853780, AA194797, AI263967, T31631, AA333851, AA330396, AA342316, AI569315, AA332661, AA852331, AA092962, AI750253, R27794, AA346374, AA332339, AW196741, AI537624, AA040329, AA328122, AA233015, N63241, W57799, AA344504, AA232701, AA092106, H39522, C02028, AA386156, T29615, AA334576, AA304992, AA194648, R09649, R07913, T49492, T31628, AI751984, AA328379, AA334087, T31612, R07858, AA332886, AA329886, AA449254, C00044, AA348035, AA328980, AA361011,



			<p>SEQ ID NO:1905, b is an integer of 15 to 3989, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1905, and where b is greater than or equal to a + 14.</p>	<p>AA732053, AA807156, N31650, D61907, AA604009, AL121217, C75317, AI183839, AA285257, AI631612, AI701860, AI872948, AA724511, AA593781, AI955474, AA490358, AA348286, AW014127, AA034503, AW382984, AA114216, AA714035, N44341, AA083061, AA401848, D82796, AA813448, AI707514, AW242769, AI695226, AA039307, D82808, T57805, AI865947, AA490260, D79331, H45236, AA312976, AI904624, R62919, D59331, H67517, R62920, T96420, R21224, D62945, AI648439, AW383006, AA789111, R63601, D62711, AA336494, AA340489, T39404, AA247910, N67607, T82367, AW070205, T27263, AI625255, H68430, AI824522, D82698, R21223, AI401720, N59296, AA249438, AI217233, D82710, D59332, AA565565, AA450364, R95490, AA490906, C01268, AW363022, AA913585, AA491092, E13124, U42424, U58512, U61266</p>
1906	HSYBP46	877408	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2615 of SEQ ID NO:1906, b is an integer of 15 to 2629, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1906, and where b is greater than or equal to a + 14.</p>	<p>AI963125, AI609225, AI884581, AW069271, AI953978, AI567519, AA703985, AI858101, AI281477, AA878466, AW084603, AA004204, AI755045, AI753615, AA122291, AW150834, AL038513, AA706823, AI814914, AA127736, N32519, AA706805, AI564735, AI670785, AI754803, AI888126, AI654845, AA452231, AW385337, AI160667, AI755281, AI122842, AI127349, AW088731, AI083555, AA609330, AA058930, AA486379, AW021109, W93848, AA115524, AI090089, AI570898, AI262822, AA903134, AI697486, AI088658, AA121511, AI580763, AL038512, AW439391, AI341677, W52306, AA010309, AW069115, AI127946, AI692736, AA600038, AW068714, AI354707, AI589319, AI371826, AW008422, AI754320, AI346302, AA723122, AA010310, AA599273, AA137194, AA599504, AW069432, AW088383, AI751005, AA725207, AW385359, AI304554, AI457114, AW191921, AW020206,</p>

1904	HDPFP36	877396	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 4025 of SEQ ID NO:1904, b is an integer of 15 to 4039, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1904, and where b is greater than or equal to a + 14.</p>	AA852208, AA852209, T10360, T10361, T58496, F03496, AA694056, AI269768, AI560475, AI139867, AI150406, AI659249 AW242873, AI638226, AW014789, AI928114, AI478983, AI075890, AW242842, AI675131, AW014540, AW372249, AA630413, AI313145, AI653172, AA134046, N32561, AI752719, AI653034, AA489839, AA551242, AA480899, N53472, AI092888, AI479478, AA210774, W00846, AI761985, AI276657, AW151703, AI830594, AI589236, N41905, AI753040, AI335745, AA489659, AI027334, W46149, W57952, W58099, AA846532, W58085, AI423910, AI126500, W00854, AA923540, AA669903, W73619, AI620667, AI312838, AI041901, AA126268, AI357683, W58035, W73667, AA232572, AW002525, W03762, N98674, H06349, AA700807, AA134045, AA283647, AI752720, AI693833, AA064885, AI093714, AI033028, AI167615, AA902590, W46161, N23622, AA704812, AA910235, AA126386, AA480960, R40680, AI032472, N41728, AI675041, AI590268, R80530, AI344793, R80419, AA480245, AA991447, R86064, H06293, AI318610, AA064808, AA810121, AA283646, H98584, N23621, AA811695, H09433, AI241317, AI470594, R40250, AW181920, AA374575, H09084, T90456, AA569988, H84159, H84160, AI700949, H89683, N66151, R14352, AA373949, R14299, AI538863, AA644291, N89241, R91989, N68235, AA810813, AI084359, N72476, AI547027, AA232625, H89759, AA564759, AW382356, AW371061, R57492, AA249229, H97526, D50917
1905	HCFMY07	877406	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 3975 of</p>	AW004054, AI135021, AW173336, AA846316, AI208817, AA861115, AW377287, AI884576, AA403122, AW377237, AA449008, N22548, AI612907, AI697252, AI337225, AA488782, AA166884, AA114179, AA824590, AA723930, AA488998, AA534667, AI335733, AA922029, AA846011,

				H95068, AA612954, W37947, AA580556, H20424, AA459404, AA180270, H49118, H22277, AA120848, AI284303, W69299, AA635599, AI032213, AI377944, H44934, AA180255, AA046132, AI613018, AA973267, AA113087, AA026212, AI469745, AA551884, H90593, AI005020, AI222480, AW410352, AA053730, T51921, AA180226, H95056, H05168, AI567382, H51410, AA132447, AI701332, AA580777, H16457, AW068052, AI669265, W00631, AA676405, AI026137, H94704, AI075680, AI355337, AA654907, F07217, W87892, AA329066, AA190498, H26731, AW166037, AI309017, AA180254, W15177, T57363, AA085889, W87601, AA688235, AA046089, AA701113, H94488, X01630, AR052178, M26198, M36708, M31690, X72012, L00084, U37439, K01846, AC004616, K01845, AC003989, Z23142, S69407, X77952, D16950, L00081, U37442, Z36810, D16853, K01848, K01847, L00079, M31693, L00082, L00083, M31698, M34903, L00080, M31697, U37441, T51412, T51710, T54123, T57446, T59510, T59556, T61192, T40610, T68237, T69436, T69569, T69637, T70491, T71461, T71584, T71607, T97732, T97836, R18156, R37533, R40277, R41703, R41703, R40277, R74521, H04540, H22242, H24788, H26732, H41805, H44660, H4973, R83630, R91865, R92705, H49054, H51452, H54616, H54617, H56301, H58770, H58822, H63647, H63648, H73772, H79204, H79709, H90004, H90499, H94167, H94574, N68952, N69990, N74472, N81114, N91877, N93029, N94630, W19782, W21267, W45627, N90672, AA025144, AA026595, AA035442, AA069289, AA120847, AA128188, AA128189, AA135326, AA152174, AA180269, AA188704, AA189129, AA196144, AA468336, AA503585, AA512973, AA513355, F15917, AA631927, AA633458, AA658505, AA688002, AA864500, W07470, C00341, C01724, AA482538, AA628208, AA669415, AA719284,

	correspond to the positions of nucleotide residues shown in SEQ ID NO:1903, and where b is greater than or equal to a + 14.	AI804511, AW410178, AI434575, AI589609, AA664262, AW409614, AA430234, AA479644, AA488187, AW305031, AA410912, AI313158, AA488684, AI355319, AA430559, AI190998, AA676466, AW409596, AA476902, AA878887, AA902228, AI687559, AI074371, T51288, AA459629, AW303926, AA599915, AA485902, AI126733, AI445068, AW409577, AA593873, AI016575, AA719627, AA488240, AA482604, AW303900, AA486198, AA430025, AA847289, AI188216, AW409876, AI246054, AA402700, AA421202, AA416583, AA847234, AA630648, AI802458, AA211469, AA190840, AW025006, AA035463, AA186363, AA992133, AA670258, AI469676, AA426620, AA179226, AW300817, AI161092, AI199582, AI339697, AA993589, AI083639, AW001456, AA758347, AA633544, AA987682, AA486304, AI889937, AI581339, W45576, AA701272, AI565866, AI347560, AI079926, AI146534, AA601655, AI459359, AA489322, AI247541, AI469729, AI074396, AW001571, AA579941, AI278644, AI459387, AA513381, AA477332, AI076715, AA976943, AA833630, AA149959, AI921791, AI280849, AI174208, AI066715, AI285157, AA194865, AA132930, AI673225, AI269574, H16257, AA588880, AA133075, AA188878, AA627878, AA025145, AI568930, AA196286, AI220665, AA723359, AA954162, AA489559, AA630299, AA135404, AA188819, AI362548, AA132630, AI095498, N78671, AI453521, AA804703, H05127, AA477015, AI802650, T71317, W20292, AA665815, AA186894, AI984554, AA488648, W72251, AI094464, AI810394, W03180, AA026596, AA112256, AA486030, H39838, AI074194, T68162, AA111856, AW247688, AA029620, AI091141, AI700362, H39837, AA724925, W69320, R76662, H95672, W37885,

			than or equal to a + 14.	AI498762, AA865546, AI189894, AA740394, AA133324, AI129125, AW022772, AA493572, AI202523, AA676968, AA329249, W05485, AI038788, AA716709, AA126228, N25485, AA830025, AA126339, AI358727, N56854, AA978006, AI719099, W37534, AA953629, AA663651, AI693987, AA076372, AW090432, N32431, AI362222, AA617762, AA782855, AI161045, C04906, AI356648, AI371415, AA136072, AW044060, AI937310, AA416713, AI500608, AA991563, AA126566, AA305695, AI358972, AI926596, AA384023, T40849, AA076501, AI991793, AA730185, AI698869, AI949134, AA687665, AA121023, AA988991, AA369523, AW275473, AA339483, AA300942, N35481, AI363884, AA369524, AA355468, AA845483, F29460, W52535, AI810861, AA582099, H19093, N80825, AA708946, AA384975, AA379550, AA373476, AA648147, AI818027, AA534415, N56694, AW083204, AA372060, AA496767, AW007697, AA748067, AI655704, AA987626, AA042892, M62297, AA043512, AA043513, AA384593, AA372059, AI086772, AI279119, AI635811, AA384973, AW002936, AA480294, AI276970, AA515682, AA043019, AA773750, AA169816, AL038644, AA133400, AW080380, AI434682, AA384974, AI300543, AA176343, AI278392, AA706110, AA678943, AA515683, N20394, AA375542, AR030958, AB014532, AC004922, S77329, U11861, AF058791, T39861, AI421422
1903	HWHQH17	877393	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2796 of SEQ ID NO:1903, b is an integer of 15 to 2810, where both a and b	AI346901, AI191444, AW001394, AL036955, AI660571, AI818120, AI018511, AI052368, AW027921, AW007170, AA603096, AW057755, AA485948, AI149233, AW081475, AI677997, AW410351, AW300638, AA488667, AW409854, AA402239, AA486496, AA486050, AW409878, AA486507, AW409856, AW194332, AA554501, AW084623, AW409835, AA617980, AI040998,

1901	HBXAC19	877388	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 161 of SEQ ID NO:1901, b is an integer of 15 to 175, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1901, and where b is greater than or equal to a + 14.</p>	AA349465, D80800, AI937868, AA102488, AW150270, AA349466, AW333965, AA330631, AA158399, AW083453, AA156068, AA350488, AA161281, AA654017, AW075493, AI094530, AI205125, AI686221, H41345, W89039, AA548969, AW338483, AI334361, AA102489, AI961671, AA351820, AI570099, AA367255, T98883, AI926390, AA631107, AA301787, AA143489, T18598, AA102418, AW189862, AA027021, AA376185, AA904590, D31580, AI590590, AW082999, AA702382, W88756, AL042199, AW134571, AI198157, AW009324, AI811883, AW003196, D29325, D29337, AI702386, AA043408, R45887, H50462, AI858384, AI624949 U57001, U66406, U62775, AF025288
1902	HWLNV37	877390	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1793 of SEQ ID NO:1902, b is an integer of 15 to 1807, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1902, and where b is greater</p>	AI887998, AA452467, AI498141, AI468007, AW088566, AI143229, AI468019, AI924042, AI302076, AW130545, AW406571, AA552071, AI857610, AA148267, AA496087, AA148266, W37673, AA805118, AA894716, AA416636, AA729667, AA722262, N44792, AI436679, AI313409, AA846175, AA866080, AA126664, AI459662, AA569841, AA865000, AI313239, AA708711, AI184015, AI311722, AA626625, AW406853, AW189410, AW406861, AA406040, AA976761, AI186007, AA136156, AW193942, AI150739, W15643, AI365686,

1899	HELB30	877384	<p>NO:1898, and where b is greater than or equal to a + 14.</p>	<p>AI824451, AI244271, H62456, AA916276, AI084430, T29815, T62961, AW444516, D25970, N48191, T63212, AA252955, AW419194, H61450, T63194, H17988, AA939180, AA535982, T35269, AA962328, R06301, AW304307, R68203, AW368013, AW364400, AW364354, AI264114, R68204, R06246, AW364364, AI262874, AW364338, R89888, N44181, AW384579, R89849, AI565221, AW050406, AW362424, AW384580, D12170, AW294181, T24830, AW337772, AW364399, N53338, W90688, AA253123, AA102379, H17987, AI344295, AW364396, X73882, Y15197, AL023284</p>
1899	HELB30	877384	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1170 of SEQ ID NO:1899, b is an integer of 15 to 1184, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1899, and where b is greater than or equal to a + 14.</p>	<p>AA059485, AA278695, AA654731, AA278203, AI475552, AA001323, AA057712, AI628148, AI935011, AI479111, AI248082, W49737, AA009479, AW449837, AA447481, R06619, AA040474, AI925539, AI347058, AA740520, W86694, T29489, AA341731, N59177, AA632345, AA057395, AA836847, AI683333, AI805718, AA120879, H59542, AI379485, R25939, AW182401, T95573, AA281718, AI918021, N41576, AA262292, AI425046, R01630, T50780, AA993907, AW151322, AI911765, AA740339, AI186344, AI583330, W25428, AI193756, AA001910, N75914, AA921773, AW363532, AA693648, AI242044, AI753406, AA588342, M60618, AF056322, U36501</p>
1900	HHFMH12	877387	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 3864 of SEQ ID NO:1900, b is an integer of 15 to 3878, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1900, and where b is greater than or equal to a + 14.</p>	<p>AI096627, AI750041, AI589918, AI971206, AI567485, AI870013, AI492558, AW082735, AW071873, AW068564, AI494149, AI431911, AA158252, AI422826, AI493768, AI363488, AI460100, AW104306, AA100840, AI755276, AA476207, AI992015, AW026405, AI190217, AI738539, AI439206, AA037160, AI361483, AA877117, AA425180, AI372673, D80801, AA678831, AI376927, AA160849, AI038534, N77542, AI418906, AI359937, AI084962, AI356122, W88956, AI499098, AA325211, N62261, N94717, AA043409, AA789304, AA355373, AI372674, H63354, AA313505, AA351821,</p>

1897	HILBZ32	877378	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 843 of SEQ ID NO:1896, b is an integer of 15 to 857, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1896, and where b is greater than or equal to a + 14.</p>	AA789097, AI005313, AA777794, AI041134, AA856987, AI700317, AA769862, AA804528, AA831168, AA494334, AI143496, AI141222, AI372907, AA831166, N64843, N92087, AA769007, AI075136, AI076701, AA305065, AI076409, AA315766, AI273523, AA450169, AA314707, AA284166, AA158102, AI352491, AA257019, T96666, T28941, AA352693, AA627383, AA257103, AA464156, AI206700, T96781, AA158059, AA055005, AA757304, AW059834, AW340182, AA092745, AI678081, AW368066, L27711, U02681, I30245, L25876, AL049778
			<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 765 of SEQ ID NO:1897, b is an integer of 15 to 779, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1897, and where b is greater than or equal to a + 14.</p>	AI739135, AW173105, AI066521, AW261971, AI954494, AA830348, AA789097, AA284072, AA804528, AI005313, AA777794, AI041134, AA856987, AI700317, AA831168, AA769862, AL039012, AA494334, AI143496, AI141222, AI372907, AA831166, AA769007, N64843, AI075136, AI076701, AI273523, AI076409, AA305065, AA450169, N92087, AA315766, AA158102, AI352491, AA314707, AA257019, T28941, T96666, AA627383, AA464156, AI206700, AA257103, AA284166, T96781, AA158059, AA352693, AA055005, AA757304, AW059834, AW340182, AI678081, AW368066, AA450104, AA092745, L27711, U02681, L25876, I30245, AL049778
1898	HAPOR25	877380	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 3296 of SEQ ID NO:1898, b is an integer of 15 to 3310, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	AA272420, AW242297, AA165082, AW263065, AI378393, N34290, AA488409, AI347346, AA701568, AI174216, AI668973, AI918787, AA948264, AA594684, AW299275, AI222510, AI243187, AW070414, AI076437, AA488545, AA470051, AW380452, AA164540, AI076271, AA657436, N75339, AI473793, AW025483, AA701579, N58947, AA577451, R77252, AA897628, T62571, AA102397, R77251, AA704389, AI697267, AA826647, W90783, AA632480, AI032244, AA583140, W01846, T31054, Z43387,



1895	HAJBN08	877375	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 536 of SEQ ID NO:1895, b is an integer of 15 to 550, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1895, and where b is greater than or equal to a + 14.</p>	<p>I50133, AB012117, Y17187, I09494, A45456, AR066488, AR016514, AR060138, A26615, AR052274, AR008277, AR008281, A85396, AR066482, A44171, X64588, Y09669, A85477, A43192, A43190, AR038669, I19525, A86792, AF135125, AR066487, X93549, U46128, AR066490, I14842, D88507, AR016691, AR016690, AR054175, D50010, I18367, A63261, AL133015, AR008408, I79511, AR062872, A70867, AL080118, AR029580, D13509, A64136, A68321, AR060133, A08456, A31057, T47722, T47723, T55703, T91272, T78911, T78964, T95679, T96956, T97068, T98840, T99143, R00385, R21263, R21264, R31911, R31957, R62970, R63024, R63509, R63555, R78123, R79931, R80019, H03256, H04441, H27156, H47899, H47900, R92467, R98387, H78782, H79278, H79389, H85490, H96640, N20906, N30033, N31502, N74163, AA026408, AA040602, AA040685, AA079412, AA173557, AA190828, AA491953, AA492100, D78982, N85431, W26462, C00757, AA173722, C75590, AA600070, AA678220, AA732900, AA852262, AA852355, T23896, T23897, T23930, F05444, AI360546, AI473496</p>
1896	HFVHT62	877377	<p>Preferably excluded from the present invention are one or more</p>	<p>AA350728, AA316351, AA112015, AA216692, AW246040, AA693635, AW407512, N55660, AI362985, AJ002190, AF043937</p>
				<p>AI739135, AI066521, AW173105, AW261971, AL039012, AI954494, AA830348, AA284072,</p>

	AI830239, H96641, W76543, AI819930, N31417, AA313131, W74348, AI452827, AI288849, AI752417, AI302536, AI582458, AA598601, AA128732, C75417, AA909646, AI032902, AA075184, AA171822, AW022850, AW002778, N23836, AI817387, N24881, AI814964, AL048124, N25180, AI304602, AA669993, AI921652, AA595396, AW380756, AI302375, AI269579, AW339078, AI824720, AA775137, AI439371, AW239521, AA887673, N24118, AI362463, AA515311, H99628, AW337988, AI700215, AI815228, AW002735, N36048, N31008, W49555, AI050040, AI146896, AA687741, AA862753, AA884028, AA076641, AA470703, AI689178, AI436443, AI032308, AA174013, AA996198, AI249384, W44341, AA569689, W45649, AI968532, W44455, AA703635, AI862948, AW449712, AI579942, W04328, AA962252, AA158264, AI885948, N40273, AI142967, AW193168, AI926056, AL047210, W45595, AI269843, AA156332, AA128733, AI290452, AI383555, AW366953, AI862589, AA969736, AI570732, AI220458, AI335877, R00074, AW024966, W49554, AA157265, AA329010, AI018121, N36300, AI140345, AI090448, AI752028, AI131364, R66674, W84537, AA661834, AI446707, AI868207, AA642245, AA075185, AI906030, AW243595, R92565, AI476033, AW198023, W94614, AW059924, AI784436, AI932522, X64875, I09499, M31159, AR021228, M35878, M31837, M76478, AF085482, J05228, S56205, M33300, AR021226, X81581, AR060428, AR018791, AR018793, AJ223172, Y16351, I09493, A62298, A84916, AR018138, A62300, AJ132110, Y17188, D26022, AF058696, AR008278, AB028859, X67155, A25909, A82595, A67220, D89785, A78862, D34614, X82626, AR016808, A30438, D88547, I82448, Y12724, AR060385, X68127, U79457, AR025207, A94995, AB002449, AR008443, I50126, I50132, I50128,

1894	HOELC15	877373	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2603 of SEQ ID NO:1894, b is an integer of 15 to 2617, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1894, and where b is greater than or equal to a + 14.</p>	AA777967, AW166867, AA535376, AI884496, AA953028, AA969906, AW276245, T40454, AI889115, AW137558, AA279095, AW393132, AA773707, AW393156, AI932456, AA648104, H16423, X69398, Z25521, AF017437, AB012693, Z25524, D87659  AI625476, AI379830, AW190863, AA861203, AI952079, AI921025, AI955634, AI587088, AI926590, AI572602, AW079778, AI818020, AI978757, AI963206, AI955860, AW190795, AI587161, AI924265, AW190680, AW192746, AW152121, AW337223, AI823711, AW190516, AI623641, AI674875, AI624269, AW192636, AI573153, AI620393, AI538927, AI683156, AI860782, AW074297, AI683833, AI685181, AI923388, AW173674, AI587424, AI627454, AI453249, AW131016, AI623652, AI984752, AI084796, AI802264, AI110775, AW074064, AI571619, AI097497, AI804583, AI697355, AI445032, AI570335, AI884376, AI587134, AI754165, AA910529, AI560022, AI813449, AI028123, AI333407, AI753639, AI432646, AI683000, AI818473, AI628183, AI913951, AI193030, AI587385, AI190931, AI571989, AI520669, AI198766, AW152597, AI587043, W94653, AI520755, AI868031, AI492736, AI190373, AI571651, AI971361, AI285408, AI250818, AI299640, AA599333, AW337268, AI992004, AI313475, AI191817, AA872416, AA921724, AI754230, AI962031, AI289514, N24418, AA622296, AW152146, AI753534, AI751083, AI074992, AI436436, AI559198, AA173912, AW337830, AA722578, AI304733, AI632052, AA854050, AI680348, AI751084, AI086679, W45594, AI610384, AI086711, AA716327, AW241380, N40742, AI076955, AI692374, AI754958, AI358461, AA904719, AI262790, AA947025, AI247519, AI280126,
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1892	HMKAK86	877363	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 362 of SEQ ID NO:1892, b is an integer of 15 to 376, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1892, and where b is greater than or equal to a + 14.</p>	AA243213, T35681, C04078, C75653, T11331, T40433, AA169471, AA973669, W46200, AA836447, W23989, T18555, T11401, T39150, AA094342, AI824772, W17101, N91885, AA453560, T11352, T10404, N47782, AA091310, C00888, AA165310, T27528, AA248615, AI420657, R79019, T25720, AA809895, R31791, D45259, R63697, AA089814, AA863104, AI095737, T11400, AA523550, AA913502, AI218901, AI827982, A93912, M31470, A93910, D49727, D50264, D49726, D49725, AC003957, AL035361, R62747, AA853568, AA916254, AA969277  AA190594, T40630, AI920974, AI055924, AW081296, AW103255, AA037707, AI269490, AA181191, R22340, AA053866, AI923333, AA516448, AA344620, AA347824, H05424, H02246, R22341, T40694, AA344748, AW449318, AA737586, AI950008, AA037725, AA345669, AA302793, AA302797, AI355125, T39494, AW150691, AA902521, AI278972, AI270407, AB033054
1893	H6EDF71	877370	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1290 of SEQ ID NO:1893, b is an integer of 15 to 1304, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1893, and where b is greater than or equal to a + 14.</p>	AW190446, AI961479, AI923277, AI884400, AW129387, AI432621, AI701980, AI613026, AA418709, AI635480, W93648, AI491762, AI270167, AI280720, AA918056, AA938271, AA418701, AI338213, AI707674, AI476785, AA478755, AI082024, AA455447, AA834685, AI742309, AI857345, AW090377, AI708271, AI016116, AA588253, AI167998, AI445021, AA455448, AA669129, AI474588, AI208596, AW015585, AW015582, AI283110, AA773711, AA558268, W93910, D54259, W52496, AW195549, AA418855, AA937302, AA960793, AA976090, AW105521, N62182, AA009747, AI686709, AW178327, AI275229, T39172, AA471190,

<p>SEQ ID NO:1891, b is an integer of 15 to 3035, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1891, and where b is greater than or equal to a + 14.</p>	<p>AW148927, AI693209, AA313329, AI634356, AA165311, AW015279, AA435562, W48807, AA770568, N33995, AW337556, AI200909, W52177, AI925678, C75536, AA740996, AI056139, AA639344, AA062558, AA044616, AI270757, N51453, AI088578, W49807, AI302975, AA975134, AA176436, W58474, AI288721, AI090980, N36852, AW440100, AA708923, AW403227, AA746255, AA846487, AI075216, N56895, AA644436, W60313, W52178, W60262, N34473, R80598, N35139, AA063056, C75383, AW080740, N46123, AA468100, AA888852, AI339843, R80597, AA178883, N36227, R23907, AW272245, AI185045, AW204631, AI244465, AI347721, AA305934, AA158097, AW027841, R23998, N36871, AA262561, AA626808, AA040760, AI597694, H13872, R78677, AI127632, AA158096, R24938, N46141, AA165180, H94816, AA165152, T28111, H89174, T20158, AA857506, AA169476, AI523244, H97960, AA366030, AA885512, N32999, AA042803, AI291968, AW271335, AI928012, AI582354, AA905984, AI374631, AI391678, AA654121, AI470822, AI659820, AI435866, AA478972, AI672499, AA782245, AI683540, AI242454, AI963948, H83799, AA098811, AI970953, AA098979, W47019, N24550, AI656583, AA098926, AI811590, AI346328, AI702054, AA771762, AI926667, AI565050, AI669676, AW300195, AI078689, AI910690, AA991913, D20104, AA610706, AA329386, AW023680, H80964, AI824554, T70014, R23906, AI432060, F00987, AA677620, AA450363, H00588, AW179301, R45201, R82731, AI912968, AA100143, AI681692, AI015103, R78922, N89579, D31543, R23127, T39145, AA069266, R23125, H83940, AW404323, AA730321, AA091296, R23124, AA069494, AA808762, AI674511, T69942, AA319786, AI370594, AA370257, R23126, Z28753, T29433, T10467, AI420216, AI365551, AI597664, AI972622,</p>
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1889	HLQGF34	877356	SEQ ID NO:1888, b is an integer of 15 to 413, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1888, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 769 of SEQ ID NO:1889, b is an integer of 15 to 783, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1889, and where b is greater than or equal to a + 14.	AW007836, AA873089, AI052145, AA702706, AI739300, N74374, AW055276, T40984, R10554, T98255, N74426, AA376913, AA416822, T40120, AI861809, AI678780, AA343939, T98311, AA878869, AI761228, X90579, L26985, AF209389, J04813, S53047, X12387, M14096, M18907, J04449, D31921, AF182273, M13785
1890	HCDCF78	877358	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 385 of SEQ ID NO:1890, b is an integer of 15 to 399, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1890, and where b is greater than or equal to a + 14.	AI703276, AW188039, AA451771, AA316434, AI690259, AI681353, AA045904, T29610, AI627945, AW188125, AW188144, AA099043, AW237788, AI470110, AW170058, AI654577, N21480, AI678192, AI745496, AW292165, AA449964, AI167571, AI186510, AI392894, AI459190, AW196865, AI761196, AI199686, AA767664, AW373992, AI129612, AI272655, AI272824, AW051688, AI765956, AI220043, AA099044, AI681033, AI628056, D17400, M97655, D25234, L76259, M77850, U63380, U63381, U63382, U63383
1891	HMIBE59	877361	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 3021 of	AL043108, AI912625, AI268389, AA541465, AA626702, AI814451, AA703936, AW137200, AI769406, AI814300, AA843784, AI677825, N90942, AL133947, AI122639, AI583230, AI956122, W58349, AA043151, AI911861, AI146802, AA433844, AA829527, AI829684, AA393149, AI248810,

1886	HDTAH72	877347			<p>AF113699, AL137558, AL078630, U42766, AL133049, AL080074, AR066486, E12580, AL050149, U51123, AF146568, U53505, AR064250, Y10655, AL137526, AF159148, AF039202, AL049276, X63410, AB026995, I52013, U55017, X67688, U68387, AL133015, AF010191, S78453, AL050280</p> <p>AI268315, AI344319, AA531249, AI952869, AI492586, AA588629, AW044245, AI246254, M78525, AA621945, H97851, AW082375, R34105, AA376468, AA376668, AA376330, AA224458, R34106, AA166983, D58161, AI919577, C21057</p>
1887	HARAG42	877351		<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1879 of SEQ ID NO:1886, b is an integer of 15 to 1893, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1886, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 419 of SEQ ID NO:1887, b is an integer of 15 to 433, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1887, and where b is greater than or equal to a + 14.</p>	<p>AA534438, AA296922, AI732343, AA502919, AI732203, E13091, AR028526, AF048700, E13090</p>
1888	HCQDL20	877355		<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 399 of</p>	<p>R10554, AA873089, AW007836, AA376913, AA702706, AI861809, AI052145, N74374, AI739300, AW055276, T40120, AA343939, T40984, J04813, AF209389, S53047, M14096, M18907, X12387, J04449, AF182273, D31921, M13785, X90579, L26985</p>

	AA491047, AA393770, AA909279, D20449, AI696435, H11527, AA398313, R41605, AI584130, AI473208, AI862134, AI273856, AL036705, AI539260, AI673140, AA715307, AA809974, AI369807, AL135047, AI440260, AW083572, AI554344, AA580663, AI683972, AI440238, AW151974, AI923389, AI440263, AI683568, AL138376, AI554821, AW020561, AA641818, AA761557, AW366372, AI653402, AA115869, AA748353, AW055075, AI432644, AI538298, AI089748, AI587000, AI590043, AL134830, AI682640, AI954080, AI691131, AI572396, AW087262, AI094749, AW162194, AI613038, AI557104, AI866469, AI539690, AW089439, AI475270, AW087445, AI625293, AA065052, AI289310, AI678857, AI445505, AI370965, AA282824, AI866457, AI872423, AL135012, AI591093, AI219380, AI250282, AI889728, AI567582, AI468959, AW151132, AI498716, AI538805, AI419826, AI921155, AI685798, AW075382, AI149977, AW195253, AL119748, AI915795, AW243886, AW130129, AI925736, AW168012, AI798114, AL121270, AA609644, AI440236, AW268122, AI680221, AI064830, AI473471, AI623389, AI283322, Y11254, AR050959, AC002464, X06146, AL137557, AJ238617, AF150103, D44497, AL031732, AI5345, AL133084, Y18678, A93914, AF126247, AF100752, AL133608, AL110171, AL117460, M85165, I03321, U49434, AL137539, AL137459, AF082526, E12888, AF145233, AF118094, AL133113, U92992, AC002287, AF017437, I33391, AL133637, AF069506, AL122101, AL133080, AL133053, AL122049, U70981, AF115392, X82434, AL117587, U67082, AL137284, AR034821, X15132, AF043642, AL137479, AF051325, I46765, S63521, AF004162, AF161413, AJ238093, AL122110,



			<p>the general formula of a-b, where a is any integer between 1 to 844 of SEQ ID NO:1883, b is an integer of 15 to 858, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1883, and where b is greater than or equal to a + 14.</p>		
1884	HDTBO06	877344	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1405 of SEQ ID NO:1884, b is an integer of 15 to 1419, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1884, and where b is greater than or equal to a + 14.</p>	<p>AI627846, AI686196, AI766030, AA159730, AA159731, AI478216, AI745281, AA683246, AA252582, AW085579, AA936240, AA464699, AA732427, F11142, N62186, AA825887, N90846, N77132, AA376347, F08813, H50638, AL121257, AL021937</p>	
1885	HEGAM94	877346	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1999 of SEQ ID NO:1885, b is an integer of 15 to 2013, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1885, and where b is greater than or equal to a + 14.</p>	<p>AI935271, AI762915, AI809275, AA398950, AI127111, AI813351, AA749298, AA705921, AI343768, AA776967, AA766587, AW070583, AI052069, AA291984, AA715043, AA460658, AA804876, N44967, AA394137, AW071467, N93279, AI343843, AA393817, AI452856, AA292934, R90963, W72279, AA861873, AA526081, AI819873, AA226137, AA262543, R72676, T17354, AA514931, R73310, R90959, W25119, R64455, AI783605, W76306, AI624523, AA490863, AA261906, AI864544, AW068181, AA860972, R72980, H83354, AA359560, AI632879, AA291985, AA255873, AA325261, AI057127, R48640, R18641, AA461005, AA261923, R18640, H83702, Z38970, N36710, AL134185, H90736, H59529, H90786, AI784395, AA652150, AA652026, H60402, Z42828, AA226136, AA776284,</p>	

			<p>AW179018, AW179024, D59373, D80247, AW179220, AW179020, AI557751, AW177456, AW179329, AW178980, AW177733, AW378528, AW178908, AW178971, T11417, D51103, AW179017, AW179004, AW179009, AW179012, AW178914, D80014, AW367967, AW378543, AW378525, D58246, AW276892, AW177728, D80157, AW177722, AW178911, D51759, AW178774, AW352163, D59503, C06015, AW178983, AW352120, D80258, AW178781, D58101, D59627, T48593, AW378539, C14975, AW177723, D45273, D59653, AI525923, AI557774, AI535850, C14973, T02974, D45260, AW378533, H67866, AW367950, D51213, AW177508, AA809122, H67854, C03092, D80228, AW177497, AW177734, AW178986, D59317, AI525227, D60214, T03048, AI525917, AI535686, C14344, D14520, AF132818, A84916, AJ132110, A62300, A62298, AR018138, X67155, Y17188, D26022, A25909, A67220, D89785, A78862, D34614, D88547, AF058696, X82626, AR008278, AB028859, AR025207, Y12724, AB012117, A82595, X68127, A85396, AR066482, A44171, A94995, AR060385, AB002449, A85477, I19525, U87250, A86792, X93549, AR008443, I50126, I50132, I50128, I50133, AR066488, AR016514, AR060138, A45456, A26615, AR052274, AR066490, Y09669, A43192, A43190, AR038669, AR066487, I18367, I14842, A30438, AF135125, D88507, AR054175, D50010, Y17187, A63261, AR008277, AR008281, AR008408, AR062872, A70867, AR016691, AR016690, U46128, AB033111, D13509, I79511, A64136, A68321, AR060133, AR064240, AB023656, U87247, U79457, AF123263, AR032065, X93535, AR008382</p>
1883	HCRMK82	877340	<p>AW262592, AW367357, AI953876, AW265047, AI290247, AI261967, AA826909, AI336616, R46813, AA055350, R39815, N73560, H16260, AW365173, AC006251, X68487, M97759, AR044912, I20962</p>
			<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by</p>

1882	HCVBK82	877339	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 441 of SEQ ID NO:1882, b is an integer of 15 to 455, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1882, and where b is greater than or equal to a + 14.</p>	AA314737, AW262708, AA626931, AW390922, AA074381, AI219498, AW390912, R27011, AW390971, AW391129, AW379257, AW391053, AA746736, AW390981, AW276892, AW391030, T24527, AI815057, AW057823, W52053, AA524509, AW374790, W60597, AF132818, D14520, AF079852, D82785 AA305544, AI970681, AI590367, AI797703, AA425084, AW316660, AI458059, AI739401, AI679607, AA889159, AW340662, AA922890, AI677745, AI216290, AA515788, AI674509, AA134355, AW338264, AI620159, AA100752, AA927236, AW206252, AI273521, AI919003, AA626931, D59859, D80227, D80269, D80195, D59275, AI214469, D59502, D80391, D59787, D58283, D80038, D80022, D80166, D51799, D81030, D59610, D80196, D59467, D51423, D59619, AA524509, D80378, D80210, D80240, D80253, D80043, D80164, D80212, D50979, D80193, D80188, C14331, D80219, D59927, D57483, D50995, D80366, D59889, C14389, D80241, C15076, D80024, AA305409, D80045, C14429, D81026, T03269, C75259, D51060, AW178893, C14014, AW178775, D80134, D51022, AW179328, D80949, AA514188, AA305578, D80268, F13647, D51250, AW177440, AW378532, AW418789, AW369651, D80522, D58253, C14227, D80168, AW352158, D80251, D81111, AA514186, D80248, AW178762, AW177501, AW177511, C14298, AI910186, Z21582, AI905856, D80064, D80133, AW352117, AW360811, C14407, AW377671, C05695, AW176467, AW375405, AW360844, AW378540, D80132, AA285331, AW366296, AW360817, AW375406, AW178905, AW378534, AW352171, AW179332, D51097, AW377672, AW179023, D80439, D80302, AW377676, T03116, AW360834, AW352172, AW352174, AW177505, AW360841, AW178909, AW178907, AW178906, AW352170, AW177731, AW178754, AW179019.
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		<p>the general formula of a-b, where a is any integer between 1 to 263 of SEQ ID NO:1880, b is an integer of 15 to 277, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1880, and where b is greater than or equal to a + 14.</p>	<p>AI224373, AI886355, AI537516, AW167777, AI911020, AI567802, AW151451, AI954293, AW194014, AI888095, AI439903, AW079859, AI885905, AI635528, AI049669, AI689096, AI636309, AW131165, AW090681, AW084440, AI538008, AI784230, AI491710, AI925164, AI220828, AI432532, AI696714, AI472566, AI874238, AA761557, AI251221, AI620643, AI886940, AI285439, F34241, AI553926, AI628325, AI559863, AI954095, AA743430, AI804505, AI357902, R39624, AI918554, AW079572, AW084896, AI580694, U82987, AC005218, I09499, AF109683, AL096728, AJ001388, X52220, U57715, AF188712, X95310, U51123, AF081571, X66975, X57084, U79523, X66862, AF090923, AB031064, X68560, AF078844, AF114818, I22272, AL137663, E02253, X60786, AF002672, M92439, X99226, X98066, AL133067, AJ132433, AF153205, AF167995, AR064250, AF119337, AL133069, AF114170, AF200464, AF090886, X63574, Y08769, AR012379, AF141976, X06146, AF072051, AF003737, L40386, A65341, AL080146, J05032, AL050108, AJ012755, AF038847</p>
1881	H2CBR23 877338	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2508 of SEQ ID NO:1881, b is an integer of 15 to 2522, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1881, and where b is greater than or equal to a + 14.</p>	<p>AW340662, AW316660, AI970681, AA889159, AI458059, AI590367, AI679607, AI797703, AW338264, AI739401, AA523715, AA425084, AI216290, AA515788, AA526334, AI677745, AA134355, AI674509, AA143532, AA313282, AA927236, AA315699, AI620159, AA922890, AW062635, AW374778, AA100752, AW374734, AW368107, AI214469, AA134354, AW368106, AA385843, AI919003, AW379835, AW389815, AW206252, AA2113695, AA305544, AW418789, AW368007, AW368008, AW374786, AA313396, AI940533, AI940454, AW062630, AI920939, R25623, AW176592, AA376950, AW389787, T48510, AW178927,</p>

1878	H2CBS31	877333	<p>the general formula of a-b, where a is any integer between 1 to 636 of SEQ ID NO:1877, b is an integer of 15 to 650, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1877, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 707 of SEQ ID NO:1878, b is an integer of 15 to 721, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1878, and where b is greater than or equal to a + 14.</p>	<p>AW409834, AI914107, R37238, AI202244, AW050863, AI656365, AA318265, Z39970, AI767672, AA757332, AI557697, AI547137, T69960, AI541216, AI535787, AI547038, AI557382, AI541533, AL122101, AL008582, AL035659, U44059, U06935, Y11149, AJ132931</p> <p>AI248204, AA677184, AI380963, AA284845, AW081587, T18597, AI525556, AI557084, C14322, AI541205, AI525500, AI557533, H65400, AW023216, AI557082, AA308485, AI541321, AI557731, AI557238, AI557263, AI557602, T69960, AI541034, AI557258, T61541, AI557697, AI535813, AI525856, AI557543, AI541027, AI535994, Z66121, AR050070, A62298</p>
1879	H2CBN88	877334	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 550 of SEQ ID NO:1879, b is an integer of 15 to 564, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1879, and where b is greater than or equal to a + 14.</p>	<p>AA054379, AA307842, AA018519, AI581828, A59459, A59517, AF048695, U52377, A59470, U53138, A59468, U52375, A59469, U52376, A59466</p>
1880	HWLOK01	877336	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by</p>	<p>AI287235, AA587620, AA729307, AI821703, AI698647, AI688112, AI767799, AA887822, AA973956, AI693558, N78520, AI824444, AI609594, AI682837, AI690813, AI584118, AI824357,</p>

1876	HISEQ81	877331	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 499 of SEQ ID NO:1876, b is an integer of 15 to 513, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1876, and where b is greater than or equal to a + 14.</p>	AA729670, AA446337, AI311820, W81234, AI300798, AA156771, AA447436, AI189310, AA664607, AI091132, AI589143, AA918355, AA929050, AI095636, AA563972, N39264, N62211, AA936816, AA932784, AI868453, AW088157, AA970862, R77959, AI205800, N32013, AI582264, AI376345, AI224485, AI274254, AI334251, AI401393, AI079459, AI091021, AI277813, C14412, AI626008, AI279571, R26078, D80204, AA621068, AI400442, R80543, AI479083, AA641535, AI378637, W81271, W81215, R62807, H00547, C14369, AI784466, AI160567, AI160569, C14400, AI926459, C14352, AA442355, C14220, C14335, AA687810, C14509, AA907451, AW025906, AA459765, AL040127, AF125099, AR029580, AF194030, AL133075, S77771, AF114784, AL137429, AL117443, AF207750, AL133645, U67958, S78453, AL137554, Z30970 AA251070, AA663366, AL035663, AC008085, U85196, AE000660, AC004707, AC006023, AF045450, AL133247, AC004897, AL031390, AF135487, Z83850, AF121782, AL109922, AL034410, AC007567, AC007043, AB026898, AP000500, AP000027, AC000064, AC007566, AL031775, AL0233581, AC004381, AL022069, A60169, AC023172, AL008629, AF072497, AC009946, A60201, AC004020, AF072499, AF064860, AF072501, A60173, A60168, AB024464, AB024472, AB024457, AB024458, AB024460, AB024479, AB024484, AB024488, AB024459, AB024469, AB024471, AB024478, AB024481, AB024462, AB024467, AB024463, AB024470, AB024473, AB024475, AB024474, AB024482, AB024476, AB024465 AA779795, AI808514, AA632293, AW263707, AI264254, AI573067, AI268002, AA983452, AI863711, AI434573, R38583, N66320, AA297783, AA889997, AW020741, AW084236, AI961833,
1877	HWLWA0 7	877332	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by</p>	

1873	HCEOF08	877326	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1393 of SEQ ID NO:1873, b is an integer of 15 to 1407, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1873, and where b is greater than or equal to a + 14.</p>	<p>N20930, AL135016, AL134824, AA702162, C03031, AW172587, AI139490, AW057590, AI809330, AI521171, N27797, AI953095, AI307324, AA705112, AA969165, AA284734, AA325231, AI219990, AA287154, C03026, AI122656, AA772255, AA782094, AW073074, AI685711, AW192900, AI659385, AA044259, AW451578, AI001129, R28506, R28654, AW296185, AA044143, AF034374, AJ224328</p>
1874	HLHBZ17	877327	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 693 of SEQ ID NO:1874, b is an integer of 15 to 707, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1874, and where b is greater than or equal to a + 14.</p>	<p>C15947, H86703, AA359866, D61503</p>
1875	HWLRP86	877329	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 251 of SEQ ID NO:1875, b is an integer of 15 to 265, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1875, and where b is greater than or equal to a + 14.</p>	<p>AI093660, AW327590, AA706690, AW296986, AA156871, AA243570, AA394118, AA402938, AI870692, AI635237, AI139325, AI286284, AW298025, AI830613, AA736608, AW008771, AW004643, AI277887, AI040732, AA628965, W93926, AI352001, AA954225, AI278572, N33931, AI128499, W46369, AI159880, AI362660, AI350268, AA622742, AA887292, AI276858, AA250840, AA437277, AA039774, AI242916, AI187707, AA804951, AI277891, N63418, AA557131, AA662472, AI251864, AI097294, AA991440, H99028, AI572652, AI610660, AA055193, AI378407, AA719806, AI423797,</p>

1870	HUKBC55	877320	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 119 of SEQ ID NO:1870, b is an integer of 15 to 133, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1870, and where b is greater than or equal to a + 14.	AA299388	
1871	HE9FH60	877321	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 408 of SEQ ID NO:1871, b is an integer of 15 to 422, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1871, and where b is greater than or equal to a + 14.	AC005037	
1872	HHEFC89	877324	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 615 of SEQ ID NO:1872, b is an integer of 15 to 629, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1872, and where b is greater than or equal to a + 14.		



1867	HKLSB60	877301	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 522 of SEQ ID NO:1867, b is an integer of 15 to 536, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1867, and where b is greater than or equal to a + 14.</p>	<p>AA225376, AA226684, T94384, R73816, R73841, AA002207, AA225124, AA225347</p>
1868	HLHTC92	877310	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 839 of SEQ ID NO:1868, b is an integer of 15 to 853, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1868, and where b is greater than or equal to a + 14.</p>	<p>R66025, R76969, AW043721, AA553904, AI417134, R58054, U77970, AR059959, U51625, U77969, AR059960</p>
1869	HWLXP93	877319	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1232 of SEQ ID NO:1869, b is an integer of 15 to 1246, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1869, and where b is greater than or equal to a + 14.</p>	<p>AL119992, AI968101, AI806911, AI656159, AI299706, AI918763, AW021370, W49735, AA805636, AA906238, AA884471, W49632, T77508, AW190697, AW020878, AA812095, AA805395, AI767210, H08971, AA909382, AA325979, AA805574, AI911384, AI520787, AC007239, U79290</p>

1864	HTPFG64	877295	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1912 of SEQ ID NO:1864, b is an integer of 15 to 1926, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1864, and where b is greater than or equal to a + 14.</p>	<p>AW268628, AW408344, AI042425, AA286908, AI093993, AW316896, AI339306, AA736991, AI271364, AI539564, AA287969, AI689236, AI240770, AA035024, AA035512, AA804433, AW001846, AI191237, AI161031, AI015252, AW192454, AI817128, AI867530, AA557231, AI452866, AA804383, AL043242, AA627583, AA809613, T27814, M30818, M33883, AC004497</p>
1865	H2CBQ45	877298	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 544 of SEQ ID NO:1865, b is an integer of 15 to 558, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1865, and where b is greater than or equal to a + 14.</p>	<p>AW263526, AA457032, AW136358, AA828242, AA313271, AL078644</p>
1866	HCQAD77	877299	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 335 of SEQ ID NO:1866, b is an integer of 15 to 349, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1866, and where b is greater than or equal to a + 14.</p>	

1862	HCE2C40	877289	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 250 of SEQ ID NO:1862, b is an integer of 15 to 264, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1862, and where b is greater than or equal to a + 14.</p>	<p>AB028859, A62300, A62298, AR018138, AR060385, I50132, A82595, AR008278, AF058696, AB002449, Y09669, I50126, I82448, I50128, I50133, X67155, Y17188, D26022, A25909, A67220, D89785, A78862, D34614, AR016514, Y12724, A94995, AR060138, A45456, A26615, AR052274, I14842, A43192, A43190, AR038669, AR066488, AR066487, AR054175, A30438, AR008443, X68127, D88547, Y17187, A63261, X82626, AR008277, AR008281, D50010, AR025207, AR062872, A70867, AR016808, AR016691, AR016690, I79511, U46128, AR008408, A64136, A68321, AR060382, D13509, AR060133</p> <p>AC005368, AF059650</p>
1863	HMCDDH54	877290	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1868 of SEQ ID NO:1863, b is an integer of 15 to 1882, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1863, and where b is greater than or equal to a + 14.</p>	<p>AL133778, AW408536, AA397575, AA399688, AA725429, AA324765, AA321795, AW243558, R86033, AW271180, H65207, AL134927, AB032995, AB018253</p>

1861	H2LAW79	877288	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 829 of SEQ ID NO:1861, b is an integer of 15 to 843, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1861, and where b is greater than or equal to a + 14.</p>	<p>AR016690, U46128, A64136, A68321, AR060133, I79511, D13509, AF123263</p> <p>AA315705, AA32923, D80268, AA305578, D59502, D80164, D50979, C06015, C14389, D80038, F13647, D59275, D80195, AW178759, D80188, D59467, D80227, AW178986, AA514188, D58283, D51799, AA305409, D51022, D59859, D80043, D80022, C14331, D80166, D50995, D51423, D59619, D80210, D80391, D80240, D80253, D59787, C15076, D80269, D81030, D80378, D80212, D80193, D80196, D80219, AA514186, D81111, AW378533, D59927, T03116, D80045, D81026, D59610, D57483, C14227, D80439, D80522, D59889, T03269, D80024, D80247, AW177440, D51103, D80248, D80241, D80366, D80302, C14014, Z21582, D59695, AW178893, D80133, AW178906, D52291, D80064, D80157, AW377671, AA285331, AW352117, D80251, C14407, AW360811, D80168, D80014, AW375405, AW179332, C14298, AW179328, D59503, AW178754, AW179019, AW378532, AI525923, AA809122, AW366296, AW360817, D59317, AW352120, AW179020, D45260, AW375406, AW377676, AW378534, AW352171, T48593, AW377672, AW179023, AW178905, AW177731, D51250, AW178762, AW179024, AW178971, C03092, AW378528, H67854, H67866, T11417, D59627, AW177456, AW179012, AW178907, AW178908, AW179018, D80258, AW378540, AA514184, AW360834, T02974, C14344, AI525917, AI557774, D58246, D59551, AW179013, D51221, C14973, AI535686, AW367950, AW178914, AW178774, AI525227, AW378543, D59474, AI525920, AW378539, D31458, H67858, AI525925, D51213, D58101, Z30160, AW378525, AW352163, AW178781, D45273, AI525242, AI525235, AI557751, T02868, C16955, C14077, AI525912, Z33452, AI525903, AW378542, AI525215, C13958, AA305720, AI525237, T03048, Z86064, AL049679, AJ132110, A84916,</p>
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	AW360811, AW377671, AW178893, AW177734, D80251, AW378540, D52291, AW178759, D59373, C75259, AW378533, AW375405, AW360844, C14077, D59627, T02974, C06015, C14298, AW178906, H67866, AW179019, D51213, AW179328, C05695, AW366296, AW378539, AW360817, AW179020, T48593, AW378532, AI525923, AW375406, AA809122, AW378534, AW352171, AW179332, AW377672, AW179023, AW178905, AW177731, AW378528, AW178754, AW179024, AW377676, D45260, AW177505, AW178775, C03092, AW360841, AW352170, AW352158, D51250, AW178909, AW177456, AW179004, AW178907, AW178908, H67854, AW179018, AW178971, AW360834, C05763, C14344, AW367950, AW179009, D60010, AW179012, AW178980, AW178914, AW178774, AW178781, AW177733, AW378543, D80258, H67858, D59474, D58246, C14973, C14957, AI525917, AI525227, D59317, D58101, D59503, D51221, AW178911, AW378525, C14046, AW352163, AI557774, AI525920, AA514184, AW177728, AI535686, AW179013, D60214, AI525235, D59551, C16955, T03048, AI525925, AI525215, Z33452, AI525912, D45273, AI525242, Z30160, AW378542, C13958, AI525237, AI905856, AI525222, T02868, AW360855, D80654, D52317, D31458, AB002804, D86959, D88425, AJ132110, AF058696, A62300, AB028859, AR008278, A84916, A62298, AR018138, A82595, AR060385, AB002449, I50126, I50132, I50128, I50133, X68127, AR060138, AR016514, X67155, Y17188, D26022, A25909, A45456, A26615, AR052274, A94995, AR054175, Y12724, AR066488, A67220, D89785, A78862, D34614, Y09669, A43192, A43190, AR038669, AR008443, AR066487, A30438, I14842, Y17187, D88547, AR008277, AR008281, A70867, D50010, A63261, X82626, AR062872, AR016808, AR008408, AR025207, AR016691,

1859	HWHGC93	877285	<p>the general formula of a-b, where a is any integer between 1 to 1716 of SEQ ID NO:1858, b is an integer of 15 to 1730, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1858, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 876 of SEQ ID NO:1859, b is an integer of 15 to 890, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1859, and where b is greater than or equal to a + 14.</p>	<p>AW275818, AI969511, W68529, AA627916, AW275825, W68815, AI375939, H42716, AI611676, R48249, AA642987, AA631033, R73789, AI800001, AW452308, AW117862, AI474539, AI220853, AA730105, AA933672, H25944, AI745535, AW276480, D29313, AW381131, AW380949, C00410, AW381579, AW381130, AI220849, H25979, AA368136, AL035408</p>
1860	H2CBC75	877287	<p>the general formula of a-b, where a is any integer between 1 to 544 of SEQ ID NO:1860, b is an integer of 15 to 558, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1860, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 544 of SEQ ID NO:1860, b is an integer of 15 to 558, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1860, and where b is greater than or equal to a + 14.</p>	<p>D83865, AA307061, AI400871, AA129911, D80268, D51060, C14389, C14014, D80522, F13647, D81026, AW177440, Z21582, D81111, AW177501, AW177511, C14227, D58283, D80043, T03116, D59610, AA305578, D80022, C14331, D50979, AW369651, AW178986, D80168, D80247, AA285331, D51022, D80038, AA514188, AA305409, D59859, D80166, D50995, D80195, D59467, D51423, D59619, D80210, D51799, D80391, D80164, D59275, D80240, D80253, D59787, D80227, D59502, D80439, D80241, D80014, T11417, D81030, AW352117, D80188, D80269, D80024, D80212, D80366, D80196, D59653, D80219, D57483, D59927, D80248, AA514186, D51103, C15076, D80064, D59889, D80193, C14429, T03269, AI557751, AW352120, D80045, D80133, D80378, D51759, D80302, AW178762, C14407, D80157,</p>

1836	HLHEI46	877282	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 922 of SEQ ID NO:1856, b is an integer of 15 to 936, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1856, and where b is greater than or equal to a + 14.</p>	<p>AF014898, AF014901, AF014893, AF014894, AF014899, AF014891, AF014895, D38116, D38113, X93335, AF014903, AF014904, AF014917, AF014910, AF014920, AF014908, AF014913, X93347, AF014905, AF014916, AF014906, AF014907, AF014909, D38114, AF014902, AF014919, X97707, D38115, D38484, X99256, X89843, U95646, X14848, X59268, S75895          AI669644, AI925693, AA548892, AA233718, AI961715, AA974649, WI6617, AI092738, AW207722, AA233142, T64223, N79582, M27717, M73720, S40234, J05118, U67914, M73718, M73719</p>
1857	HCROB02	877283	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 520 of SEQ ID NO:1857, b is an integer of 15 to 534, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1857, and where b is greater than or equal to a + 14.</p>	<p>AL043619, AI632642, AI168748, AI376972, AI925713, AI703467, AI681157, AI279540, AI521713, AI888798, AA420977, N40163, AW235376, AW027303, AI581196, AI274962, AW080693, AI082185, AA437229, N51345, AW337551, AA761745, AA747627, H97971, AW440981, AA129415, AA514752, AW338816, AI264914, AW367007, AL041883, AI332872, AA768454, AA720670, AA281119, N67945, AI358787, AI978861, D62242, R55623, AA837971, AA835005, D61857, AI640690, AI695207, AA832003, AI701314, D62442, AA741386, AW297680, AI453837, AI335195, AI079445, N23185, AA843537, AI923841, AI651407, AI569072, AW070934, D63021, AI990693          AI633741, AI017113, AA305124, AA227077, X58531</p>
1858	HFKIN68	877284	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by</p>	

	AA079632, AA593495, AA617685, AA653974, AA523492, AA725126, AA428850, AA464752, AA507391, AA291811, AA214074, AI025574, AA834333, C18039, AA143135, AI910010, AA508758, AA527764, AA225751, AW373400, AA481923, AA582805, AA923266, AA554801, AA886075, AA908596, AA938043, AA879019, AA526743, AW378088, AA554076, AA090685, AA985612, AA595582, AA112939, AA564658, AA431814, AA401126, AA492096, AI954125, AA709167, AA171612, AA086336, AA532797, AI783446, AA576154, AA470370, AI910011, AA583092, AA564029, AW371295, AA680242, AW070565, AA679139, AI910004, AA620694, AA091624, AA086135, AA453608, AI133009, AA886562, C03930, AA464751, AA094464, AA194368, AI015676, AA176484, AA877931, AI936914, AA992091, AA708229, AA551520, AA694521, AI680484, AW175960, AA934835, AW371871, AA079806, AA650245, AA724218, AI620133, AA568749, AI525240, AA456614, C03144, R28950, C18721, AW362558, AA506494, AA095478, AA649597, AA534145, AA630561, AW178904, AA632764, AA702642, AA196736, AA916453, AA181000, AA127860, AA214682, AA640699, C15091, AW382590, AA210666, AA249278, AA464045, AA194421, AA216167, AA492256, AA921332, AW364429, AW373695, AW373663, AI253336, AW373685, AI832579, AW364463, AW364399, AA554414, AA159642, AI004318, H01671, AI862143, AI908712, AI052019, AI565446, AW367539, AW178905, AA193076, AI953931, AI708040, AA714432, AW383933, AI833081, AA090224, AI935127, X62996, X93334, M10546, V00662, J01415, D38112, AF134583, AF014882, AF014883, AF014888, AF014889, AF014890, AF014892, AF014897,



1855	HCQCP81	877281	<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 236 of SEQ ID NO:1854, b is an integer of 15 to 250, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1854, and where b is greater than or equal to a + 14.</p>	
			<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1145 of SEQ ID NO:1855, b is an integer of 15 to 1159, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1855, and where b is greater than or equal to a + 14.</p>	<p>AI207647, AI065109, AI207735, AI133231, AI055011, AI133300, AI110723, AI132917, AI064699, AI114870, AI064757, AI133022, AI207442, AI133620, AI174820, AI132979, AI207715, AI110641, AI133496, AA293047, AL047029, AA401001, AA477957, AI827434, AL119430, AA533278, AA149787, AI749240, AA477922, AA876525, AA618213, C17649, AA663700, AW082028, AI267206, AA563936, AI557108, AI951094, AA516319, C18953, AA654914, AA534001, AA633948, AA554486, AA196910, AA554113, AI041814, AI174849, AA595757, AA149676, AI536097, AA214075, AA548841, W29121, AI133692, AA576110, AA983610, AI267350, AA502430, AA458987, AA161230, AL043123, AA548336, AA555071, AA664569, AW073785, C17145, D51211, AI535890, AI253388, C18535, C18706, AA783018, AA410807, AA583220, AA578683, AA886497, AA758834, AI524899, AA179156, AI133161, AA224754, AA192604, AA595503, AA512996, AA897022, AA514885, AA100351, AA293439, AA400969, AA911976, AA604469, AA654272, AA197149, AA580161, AA889892, AA566006, AA908677, AA095070, AI524960, AW368638, AA579806, AA235499, AA576180, AA834302, AA587814, AI535677, AW368637, AA400809,</p>

			<p>polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 522 of SEQ ID NO:1851, b is an integer of 15 to 536, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1851, and where b is greater than or equal to a + 14.</p>	L37369, Z58904
1852	HFIXP45	877274	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1991 of SEQ ID NO:1852, b is an integer of 15 to 2005, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1852, and where b is greater than or equal to a + 14.</p>	<p>U69202, AI341555, AI808490, AI347923, AA903736, AA210763, AI139380, AI631374, AA129554, W70085, AI648656, AA932877, AA136568, R39447, F09386, AI351322, AW001825, T77200, F11728, T09089, T10129, H17528, T10128, AI867156, R59448, R59388, AI868687, Z19406, AI474036, Z42465, Z28503, Z38662, F06906, F04874, R13169, H17840, AA348361, R13170, Z45682, AB000814, D89722, U60415, AF044288, AB000812, AB000813, AB012600, U51627, AF015953, AB012601, AB015203, AB012602, AB014494, AF070917, AB000815, AB000816</p>
1853	HAQNS64	877275	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 552 of SEQ ID NO:1853, b is an integer of 15 to 566, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1853, and where b is greater than or equal to a + 14.</p>	AC005740
1854	HCQDG09	877280	<p>Preferably excluded from the present invention are one or more</p>	<p>N99659, AW404075, AA469906, AI142357, AI142321, AA316159, N42495, R57922, Z59290</p>

1849	HCRPJ05	877263			AL038509, AL042450, AL043019, AL043029, AL037085, AL042544, AL042542, AL042896, AL037094, AL037526, AL036196, AL037639, AL119304, AL043003, AL036268, AL037082, AL036767, AL037077, AL036190, AL119464, AL036774, AL038520, AL036998, AL038851, AL038447, AL036733, AL037178, AL036238, AL036719, AL037615, AL037027, AL036765, AL036191, AL036679, A81671, AR060234, AR066494, AR023813, AR064707, AR069079, AR054110, AB026436
1850	HCYBD05	877264		Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 349 of SEQ ID NO:1849, b is an integer of 15 to 363, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1849, and where b is greater than or equal to a + 14.	AA305049, N50596, AL120893, U55937, U81001
1851	HKLSD44	877272		Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 522 of SEQ ID NO:1850, b is an integer of 15 to 536, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1850, and where b is greater than or equal to a + 14.	AI183955, AW136574, AI654355, D13902, D13897, L25648, AC007993, D13899, M17523, S57220,

1847	HWLDO51	877258	<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 718 of SEQ ID NO:1846, b is an integer of 15 to 732, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1846, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 302 of SEQ ID NO:1847, b is an integer of 15 to 316, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1847, and where b is greater than or equal to a + 14.</p>	<p>AW103052, AI391708, AI452537, AI460380, AI050784, AI949725, AI052071, AW237646, AI538701, AI435508, AA621302, AA233121, AI348838, AI339780, AI800246, T67212, AI144461, AW130699, AA527371, AW205441, AA346401, AI247525, AI352551, AI651506, AA707110, R46530, AI927033, AI560516, R46529, AI918364, N75541, R51933, R72231, H45846, T67213, AA627945, N40063, AA233205</p> <p>AI830540, AA357636, AA516122, AI391596, AI670727, AA814145, AA661893, AA554670, AI335153, AW157547, AI862260, D31492, AA992253, AA972187, AI271839, AI218276, AC005606, AC005363</p>
1848	HLSAE05	877261	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 703 of SEQ ID NO:1848, b is an integer of 15 to 717, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1848, and where b is greater than or equal to a + 14.</p>	<p>AA307126, Z99396, AW392670, AW372827, AW384394, AW363220, AL119335, AL119497, AL119443, AL119522, AL119319, AL119363, AL119496, U46341, AL119457, AL119324, AL119483, AL119484, AL119391, AL119341, AL119355, U46350, U46349, AL119396, U46351, AL119418, AL036418, AL038837, AL037051, AL036725, AA631969, U46346, AL119444, U46347, AL042614, AL042965, U46345, AL134518, AL036858, AL134533, AL042970, AL134524, AL119439, AL037205, AL134528, AL042975, AL119401, AI142137, AL119399, AL036924, AL042984, AL042551, AL134538, AL042433, AL042995, AL119320, AL042850, AL119488,</p>

			present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 536 of SEQ ID NO:1843, b is an integer of 15 to 550, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1843, and where b is greater than or equal to a + 14.	
1844	HF1YJ63	877255	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 312 of SEQ ID NO:1844, b is an integer of 15 to 326, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1844, and where b is greater than or equal to a + 14.	AL135394, W87908, AB002331
1845	HWLOW5 I	877256	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 563 of SEQ ID NO:1845, b is an integer of 15 to 577, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1845, and where b is greater than or equal to a + 14.	H23330, AI796906
1846	HHFBA07	877257	Preferably excluded from the	AW130559, AA604942, AI125644, AI703464,

1841	HCRNM80	877250	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1013 of SEQ ID NO:1841, b is an integer of 15 to 1027, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1841, and where b is greater than or equal to a + 14.</p>	<p>I50126, I50132, I50128, I50133, A44171, A85477, I19525, A86792, U87250, AR066488, AR016514, X93549, AR060138, A45456, A26615, AR052274, I14842, Y09669, A43192, A43190, AR038669, AR066487, AR054175, A30438, Y17187, I79511, I18367, A63261, D50010, AR008277, AR008281, AR062872, A70867, D88507, AR016691, AR016690, U46128, AR008408, AF135125, A64136, A68321, D13509, AR060133, U87247, AB033111, AR064240</p> <p>AI479603, AW190581, AA573923, AA883422, AA625554, AW172498, AI031618, AI910454, AI332605, AI738984, AA910770, N30717, AA146619, AI348584, AA309589, AA143550, AA146653, AW293078, AA625575, AA625979, AA676991, AW384713, AA494197, AA679394, AA085095, AI800002, AI773908, AI126129, N41331, AI682193, R00299, AA143647, H79815, AA626482, AW362188, AI372964, C05152, N75441, AA085143, W89067, AI290775, AI202571, T99951, AW008713, W95658, AW384743, R45400, AI201781, AW389792, AW389779, AW389790, W95657, AW721631, AA354111, AW389774, AW192109, R29667, AW389836, AA515518, C03882, H79909, AI267185</p> <p>N65940, H82959, H72780, R09098, H90731</p>
1842	HCQCC04	877251	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 430 of SEQ ID NO:1842, b is an integer of 15 to 444, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1842, and where b is greater than or equal to a + 14.</p>	
1843	HCQCI17	877254	<p>Preferably excluded from the</p>	<p>AA129983, M73489, S57551, D17513, Z74734</p>

<p>is any integer between 1 to 501 of SEQ ID NO:1840, b is an integer of 15 to 515, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1840, and where b is greater than or equal to a + 14.</p>	<p>AA305409, D80378, D80212, D80366, D50979, D80193, D80196, D80188, D80219, D59927, D57483, D50995, D59889, D80241, C14389, D80024, D80045, T03269, C75259, AW178893, D51022, C14014, AW378532, AW178775, A1732942, AA305578, AW179328, D80134, AW177440, D81026, D51250, D80302, D80251, AA514188, AW352158, D80248, D80522, F13647, D80268, AW378540, D80168, AW178762, C14298, D58253, AW177501, AW177511, D80064, D80133, AW352117, C14227, C14407, Z21582, AW377671, D81111, AW360834, AA514186, AW360811, AW375405, D80132, D80439, AW366296, D80247, AW360817, AW375406, AW178905, AW378534, AW352171, AW179332, AW377676, AW377672, AW179023, AW178906, AW178754, AW179024, AW178907, AA285331, AW179020, AI557751, AW177456, C06015, D51097, AW352170, AW177731, D51103, AW179019, AW179018, T03116, D80157, AW378528, AW178908, AI557774, AW352174, AW178914, AW178781, AW378543, AW378525, AW352163, D80258, AI525923, D80014, T48593, D59627, AW178774, AW378539, D45260, AA809122, T11417, H67866, D45273, C03092, H67854, AW367950, AI525227, D51213, AW178986, D59317, D59503, T02974, D58246, C14973, AI525917, AW179013, T03048, C14344, AW378533, AI535686, D51221, D59474, AI525920, D59551, AA514184, D58101, Z30160, H67858, AI525925, AI525235, AI525242, T02868, Z33452, AI525239, C16955, AI525912, AI525237, AI525215, AW378542, C13958, D31458, A84916, AJ132110, A62300, A62298, AR018138, X67155, Y17188, D26022, A25909, A67220, D89785, A78862, D34614, AF058696, D88547, AR008278, AB028859, X82626, AR025207, A82595, Y12724, A94995, AR060385, AB002449, AB012117, AR066482, X68127, AR008443, A85396,</p>
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1838	HWLOW8 7	877240	is any integer between 1 to 911 of SEQ ID NO:1837, b is an integer of 15 to 925, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1837, and where b is greater than or equal to a + 14.	W53026, AF180919
1839	HWLMB22	877242	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 528 of SEQ ID NO:1838, b is an integer of 15 to 542, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1838, and where b is greater than or equal to a + 14.	W92133, AL035400
1840	H2CBA14	877247	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 428 of SEQ ID NO:1839, b is an integer of 15 to 442, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1839, and where b is greater than or equal to a + 14.	AA307110, AI791261, N36579, D80195, D59467, D80164, C15076, D80227, D80269, D59275, D59502, D58283, D59859, D80022, C14331, D80166, D51799, D51423, D59619, D59610, D80210, D80391, D80240, D80253, D80043, D59787, D81030, D80038,



1836	H2LBB51	877235	nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1244 of SEQ ID NO:1835, b is an integer of 15 to 1258, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1835, and where b is greater than or equal to a + 14.	<p>AI148116, AI276830, AI378227, AI148121, AI082653, AI972872, AA631712, AI272196, AA603075, AI018047, AI453834, AI223254, AI026628, AW298807, AI280067, AI378917, T19338, T33356, AA761507, AI272883, R51104, AA644592, T03688, AI274939, AI268664, AI690246, T33873, N52587, AA461016, T32236, AA464590, AA693417, AI470644, F09140, F10434, H06959, H22931, AA318879, T15930, AL120494, AA371748, N75010, R41316, R41317, AI834293, D81373, AA767242, AW386979, R42324, T33358, T33357, AI366186, T27271, W01584, AI700577, AI767391, AI760808, W26393, W07166, AA861382, AI816326, AI291384, AI913952, W05753, AA488932, AA411945, T09288, R11766, H24112, AW293062, AI277039, R18459, R18460, AI302024, F12831, AB002385, AC006372, U66702, U81561, U65065, U73458, A63346, A63355, AF007555, Y08569, A63357, U91574, U82439, U57345, Z50735</p> <p>AA316077, AW407693, R35424, AL121134, AA356852, F12867, AA776842, AW163365, M74089</p>
1837	H6EDT19	877237	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 747 of SEQ ID NO:1836, b is an integer of 15 to 761, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1836, and where b is greater than or equal to a + 14.	AA402106, AI734033, AA401995, AI821646, AW438634

1833	HWMBO5 0	877232	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 844 of SEQ ID NO:1833, b is an integer of 15 to 858, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1833, and where b is greater than or equal to a + 14.</p>	<p>R05760, AA079305, W07456, AA079306, AA847920, AW387693, AI925404, AI689470, AI953765, AI470293, AA806719, AA631120, AI889818, AI274527, AI249962, AI932739, AI888621, AI365256, AI679095, AW149876, AF003626, Y10043, AF022465, Z83826, Z93931, AC002526, Y10044, AC005479, AL024505, AL034450, AC002375, AL049709, AL035420, AF047701, L05085, AC004493, AF026008, Z20724, Z20735</p> <p>AI289115, AA653396, AI280875, AW439596, AA147044, AI683907, AI186619, AW191991, AI422310, AI653662, AA825197, AA854077, AA916637, AA810755, AI624228, AI763289, AA449797</p>
1834	HCQBD64	877233	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 283 of SEQ ID NO:1834, b is an integer of 15 to 297, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1834, and where b is greater than or equal to a + 14.</p>	<p>AW008122, AC005021, L48431</p>
1835	HATAP30	877234	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a</p>	<p>AI828084, AW292950, AI955290, AI425012, D54798, AA101714, AA661732, AI082095, AI433898, N78571, AA563807, AI457762, AA460668, AA101715,</p>

1831	HTWFA44	877230	<p>than or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 576 of SEQ ID NO:1831, b is an integer of 15 to 590, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1831, and where b is greater than or equal to <math>a + 14</math>.</p>	<p>AI948974, AW150262, AW005687, AI805463, AI760052, AW130854, AI092715, AI561048, AI417784, AA846295, AI027808, AI073757, AI034006, N33620, AI215790, AI393040, AI022090, H95228, AI401833, AA771890, N92602, AW103347, AA496978, H95430, AA747344, AW183814, F22014, N56754, AI942322, AI313099, AA040794, AI470290</p>
1832	HOCMF20	877231	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 3252 of SEQ ID NO:1832, b is an integer of 15 to 3266, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1832, and where b is greater than or equal to <math>a + 14</math>.</p>	<p>AI135440, W20119, AI810591, AI089310, AA044704, AA099241, AI806853, AA039903, AI420778, AI151415, AI093762, AI982907, AI871680, AI076492, AA099143, AI246659, AA041527, AA477336, AI188305, AI088688, W87880, W80803, AA479648, AW291739, AI023926, AI215789, AI768938, AA669926, AA523605, AA313436, AI452952, AI569996, AI354883, R61620, N72558, AW013938, W92312, AI168582, N33871, AI189869, W45147, AI151417, AI280515, W92299, AI379400, AA406620, AI636575, AA214649, W81054, AA748471, AA705551, AA723161, R70656, AI086670, C17933, AA830207, AW262560, W02383, AA906264, AA056377, AA040375, AI276236, AI141343, AA868115, AA862839, AI275375, H10905, AA129975, R80462, W45096, AA846612, AA847843, W87765, AA411692, AA369318, AI309745, AA359784, AA398795, AA044640, AA334622, AA367594, AI478815, AW054686, Z44983, AA367593, AI990089, R01145, AI954539, AI990659, AA379173, Z40721, AI886597, AI024032, R60952, AA670197, AA435840, AW389160, AA847919, R80663, AA056474, AA248230, N81095, AI206251, AI476295, AA211075, AI619485, N90439,</p>

1828	HFIIZ28	877220	<p>than or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 411 of SEQ ID NO:1828, <math>b</math> is an integer of 15 to 425, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:1828, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	<p>AA812688, AI418599, AI151240, AI808902, AI379148, AA878931, AI241082, AA938582, AI913473, AA194942, N30395, AA523704, AI379226, AI886468, AI472706, AI336385, AI287668, AA742997, AI754786, AW085594, AA876827, AI283450, AL044439, AA180129, AA525768, AA282183, AA628042, AA627935, AA916288, AI339391, AI289442, AL034430</p>
1829	HCQDK28	877222	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 368 of SEQ ID NO:1829, <math>b</math> is an integer of 15 to 382, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:1829, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	<p>N75183, AI366031, F12542, T74151, AC012627</p>
1830	HHEQI29	877229	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 818 of SEQ ID NO:1830, <math>b</math> is an integer of 15 to 832, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:1830, and where <math>b</math> is greater</p>	<p>AA446316, AA446497, AI198963, H38387, AI444827</p>

1825	HCQAE29	877214	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 627 of SEQ ID NO:1825, b is an integer of 15 to 641, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1825, and where b is greater than or equal to a + 14.</p>	AR018138, AF058696, A47134 AA505138, AA730263
1826	HCRMV19	877215	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 433 of SEQ ID NO:1826, b is an integer of 15 to 447, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1826, and where b is greater than or equal to a + 14.</p>	N72981
1827	HWLMF31	877218	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 576 of SEQ ID NO:1827, b is an integer of 15 to 590, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1827, and where b is greater</p>	AI806805, AA909734, AI205805, AI208930, AI023837, AI024558, AA808303, AI239842, AA904642, AI200741, AA861427, AI808962, AA971918, AA806642, AC004542

1824	H2LAC34	877213	<p>SEQ ID NO:1823, b is an integer of 15 to 940, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1823, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 488 of SEQ ID NO:1824, b is an integer of 15 to 502, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1824, and where b is greater than or equal to a + 14.</p>	<p>AA304651, AI372785, AA496464, R09787, D59627, C16955, D45273, D80168, D52291, D51213, T03048, D59695, C14298, D51079, D80949, D80258, Z33452, AW360780, D59503, C14407, D58246, D80014, C14227, D80064, AI535686, D81111, T11417, T02974, AW377669, D58101, D52059, H67854, D59317, D80038, H67866, AI525216, AI525228, AA809122, AA305578, D50979, D80195, D52317, C15076, D80193, D80251, D59551, C06015, D81026, D80269, D80022, D59467, D80164, D59275, D80045, D80227, D59502, AI557774, D80302, C14389, AW377661, F13647, D51423, D58283, D80166, AI557751, D80439, T03116, D81030, D80188, D57483, C03092, D80043, D80157, D51103, D59859, C14331, D80212, D80268, D80366, D59889, C14973, D80196, D59619, D80133, D80247, D51022, D80210, D51799, D80391, D80240, D80253, D80219, D59787, D50995, AA305409, C04682, D80024, C14344, Z21582, D59474, AI525969, D80248, D59610, C14014, D51221, Z30160, D80522, AA514188, T02868, D59927, D31458, D80378, AI525238, C13958, H67858, AI525242, D45260, AA514186, AI525923, AI525227, D80241, AA514184, AI525978, AI525912, AI535961, C05763, AI525235, AI525920, AI525917, AI525215, T11191, AI525237, AI525903, AI525922, AI525907, AI525925, AI525914, AR016808, X64588, AB010386, AR060385, AJ132110, AB028859, AB019242, A82595, A84916, AB002449, I14842, I79511, AR008278, U37689, I81198, A62300, A62298, AR054175, AR008277, AR008281,</p>
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1821	HOVCR67	877208	SEQ ID NO:1820, b is an integer of 15 to 402, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1820, and where b is greater than or equal to a + 14. Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 334 of SEQ ID NO:1821, b is an integer of 15 to 348, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1821, and where b is greater than or equal to a + 14.	
1822	HLHSV54	877211	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 498 of SEQ ID NO:1822, b is an integer of 15 to 512, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1822, and where b is greater than or equal to a + 14.	
1823	HSYBZ84	877212	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 926 of	AA922141, AA505358, AA515537, AI439152, AA603688, AI279253, AI003069, H09774, R61798, N46444, N48945, R45147, Z45425, R55783, R43907, R14995, AA348815, AB032971

1818	HSDZB30	877205	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 807 of SEQ ID NO:1818, b is an integer of 15 to 821, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1818, and where b is greater than or equal to a + 14.</p>	<p>AL122020, AL021154, AC005666, AL136295, AC002504, AL080317, AC006111, AC004526, AL049871, AL009179, AL022721, AL031587, AC011331, AC005874, AF134471, AF109907, AC005969, AC006160, AL133244, AC002550, AL022313, AI632057</p> <p>AA129439, AA425398, AI381416, R17127, AI418660, AA314750, F32787, AI590092, AW021547, AA151302, Z42142, AA904204, U77327, AF064105</p>
1819	HWLWH5 6	877206	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 356 of SEQ ID NO:1819, b is an integer of 15 to 370, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1819, and where b is greater than or equal to a + 14.</p>	<p>AI989601, AC005593</p>
1820	HWLOT46	877207	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 388 of</p>	



	AL049694, AC005048, AC005902, AC010205, AC004383, AL049553, AC004148, AF064866, AC003982, AF196779, AL049641, AC008041, L44140, AF095901, AL050404, AL031293, AF207550, AJ003147, AC005778, AC003101, AC005695, AL121652, AC006359, AL024498, AP000113, AC003107, AP000352, AC000026, AC004675, AL020997, Z83844, AL035425, AC000359, AC007666, AL008582, AL049569, AC006115, AP000130, AP000208, AC005209, AC003036, AC005632, AC006455, AP000247, AL023879, U91318, AF088219, U95739, AC005971, Z95115, AL034377, AC004804, AL049780, Z69715, AP000304, AL109827, AF067844, AL031311, AC000031, AF053356, AC006965, AC006312, AL022165, AC003002, AC007021, AC004081, AC007350, AC005102, AF124523, Z69890, D84394, AC005943, AC003973, AC004685, AC007014, AC004797, AL035405, AC005355, Z98051, AC008078, AC004796, AC004447, AC004815, AC006211, AC005015, AC007686, AC004638, Z73988, AC004230, Z84466, AC004883, AC007688, AC007707, AC012085, AL049538, AL050347, AC009330, AC004583, AL117330, AC008372, AC005726, AC007376, AC005225, AC003692, AL035697, AC000025, AC005156, AL031774, AL035455, AL133163, AC004079, AL022719, AC002115, AC004819, AC004000, AC004477, A51133, A76958, AC002350, AC007546, AC008040, AC002996, AC003043, AC005907, AC005519, AL121782, Z98742, AP000030, AC005365, AL008729, AF217403, AL132985, AC005562, AC004890, AC006948, AC002551, AC004185, AC005844, AL035403, AC004539, AP000115, AP000695, AC009247, AL031730, AC002429, AL109963, AL033523, AC000112, AC007263, AL133245, AL031053, AL021397, AC002072, AF134726, AL031659, AC012627,

	AI638091, AI089178, AA582684, AI917053, AI024439, R70884, AI859906, AI915081, AI884861, R70883, AI279417, AA678616, F08214, AI859744, AA831801, AA553457, AA832016, AI922614, AW341882, AI798242, AA484892, AA610255, N92697, AA609826, AI631059, AI797998, AI869786, F08655, AA598605, AI038324, AA857812, AI018726, AA807579, AA778962, AW265688, AW019964, AA904211, AI383596, H59611, AI150934, H59651, AI889426, AW078821, AW390284, AI347665, AI860535, AA644223, AA581498, AA020882, AI472736, F33820, AW440568, R99613, AA678932, AI288033, AW081610, T76991, AW270429, N67313, AW270351, AA362791, AI803741, AI889995, AI359200, AA126814, AI419337, AI361090, AA757426, AA364420, AI421950, AI114645, AA345594, AW192518, AI671077, AW026305, AA579281, H39839, AW303822, AA856815, AL039761, AA643829, AA402113, AI289050, AA653291, AA436140, AI358776, F17537, AI284092, H38901, AI123488, AA603558, AI246061, AA501867, AI291419, AA484022, AF003627, AF035397, AF086459, AF130357, AC007656, AF111169, AC005231, AC002316, AP000350, AP000045, AL049830, AC004820, AL133448, AC004990, Z49258, AC007055, AL121603, AL031984, AC006084, L78810, Z82208, X51956, AL031602, U47924, U85195, AC003029, AE000658, AC006251, AC005696, AC007878, AL049692, AC005480, AC005082, AC000379, AC007057, AL049872, AC005006, AL031433, AC005484, AL031295, AC007687, AC005089, AL096791, AC002312, AL050305, AC006443, AL031728, AL133371, AC002432, AL049839, AC007225, AC005330, AC004841, AC002365, Y10196, AC004408, AC005212, AL022240, AC005332, AC005514, AL033527, AL049643,

1816	HHMMB4 0	877200	<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 551 of SEQ ID NO:1815, b is an integer of 15 to 565, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1815, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 272 of SEQ ID NO:1816, b is an integer of 15 to 286, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1816, and where b is greater than or equal to a + 14.</p>	
1817	HEQAN41	877202	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1306 of SEQ ID NO:1817, b is an integer of 15 to 1320, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1817, and where b is greater than or equal to a + 14.</p>	<p>AW003740, W81689, AI862673, AW270849, AI912038, AI703038, AA937086, AI279103, AA282925, AI078559, AI768831, AA313607, AI275886, AI432429, AA903131, AI870642, AI189825, AA283134, W81688, AI521151, AW044071, AA410488, AA827169, AA730751, AA256352, AW131390, AI970675, AA989435, AA918065, AI813309, AI969627, AA255498, AA621557, AA828340, AI693110, AI351613, AI471645, AA025513, AI912910, AA410307, AW071626, AI655122, AI800296, AI651526, AI368793, AA976771, AI631084, AI829747, AI620149, AI970920, AA256209, AI422613, AI826838, AW389929,</p>

1813	HSKZE25	877191	<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 601 of SEQ ID NO:1812, b is an integer of 15 to 615, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1812, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1191 of SEQ ID NO:1813, b is an integer of 15 to 1205, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1813, and where b is greater than or equal to a + 14.</p>	<p>AC006576, Z84466, AC008012, AC006480, AC005701, AC004651, AP001053, AF019413, M20903, AC004968, AC004966</p> <p>AI740516, AI739132, AA631257, AI741376, AW068935, AI467852, AI123717, AI754551, AI752240, AW205510, AA464510, AW044211, AW028889, AW198033, AI538632, AA513096</p>
1814	HCRMP38	877194	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 586 of SEQ ID NO:1814, b is an integer of 15 to 600, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1814, and where b is greater than or equal to a + 14.</p>	<p>AI623320, AL023654</p>
1815	HDPXD55	877195	<p>Preferably excluded from the</p>	<p>AL110186, AB011097</p>

			present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 842 of SEQ ID NO:1809, b is an integer of 15 to 856, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1809, and where b is greater than or equal to a + 14.	E17300	
1810	HLHSE50	877185	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 648 of SEQ ID NO:1810, b is an integer of 15 to 662, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1810, and where b is greater than or equal to a + 14.	AA600172, AC005007	
1811	HOSDV69	877187	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 677 of SEQ ID NO:1811, b is an integer of 15 to 691, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1811, and where b is greater than or equal to a + 14.	AI769803, AI769743, AI986284, AI031834, AI017244, AI247689, AI336761, AW445026, AA933877, AA947886, AI347451, AI344592, AI580382, AW302464, AA702771, AA923510, AI302541, W88655, N74646, AI343716, AA854730, H66770, H62545, W88899, U66036, AB008164, AF026303, AJ238392	
1812	HCRMH42	877189	Preferably excluded from the	AL119483, AL119484, AL119418, AA554958,	

			present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 270 of SEQ ID NO:1806, b is an integer of 15 to 284, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1806, and where b is greater than or equal to a + 14.	
1807	HCYBG53	877176	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 320 of SEQ ID NO:1807, b is an integer of 15 to 334, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1807, and where b is greater than or equal to a + 14.	AA305151, H10843
1808	HCQDF43	877181	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 907 of SEQ ID NO:1808, b is an integer of 15 to 921, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1808, and where b is greater than or equal to a + 14.	AL122007
1809	HSHBU44	877184	Preferably excluded from the	AI683284, AW207832, AB007917, AB024568, E17301,

1804	HCRNX51	877173	<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 526 of SEQ ID NO:1803, b is an integer of 15 to 540, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1803, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 217 of SEQ ID NO:1804, b is an integer of 15 to 231, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1804, and where b is greater than or equal to a + 14.</p>	AA232079, AF110400, AB018122
1805	HHEPP92	877174	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 374 of SEQ ID NO:1805, b is an integer of 15 to 388, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1805, and where b is greater than or equal to a + 14.</p>	AI973079, AA813801, AA191593
1806	HCQAB45	877175	Preferably excluded from the	

			present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 435 of SEQ ID NO:1800, b is an integer of 15 to 449, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1800, and where b is greater than or equal to a + 14.	
1801	HFAAH06	877169	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 681 of SEQ ID NO:1801, b is an integer of 15 to 695, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1801, and where b is greater than or equal to a + 14.	W32491, AI557416, AA641955, AC007250
1802	HWLMX0 2	877170	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 896 of SEQ ID NO:1802, b is an integer of 15 to 910, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1802, and where b is greater than or equal to a + 14.	AI432361, AI394416, AI075852, AA479958, AA491075, AA588390, N20112, AW377547, AI888417, AA446881, AF155106, AB033107
1803	HCVBH52	877171	Preferably excluded from the	AA305314, AI656138



1798	HCQCT53	877166	<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 449 of SEQ ID NO:1797, b is an integer of 15 to 463, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1797, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 877 of SEQ ID NO:1798, b is an integer of 15 to 891, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1798, and where b is greater than or equal to a + 14.</p>	<p>N23022, AI742147, AA399952, AA773713, AI917300, AA773709, AA768407, N47504, AI339083, AI743525, AI276208, AI393759, AA933833, H97027, H97002, AI401278, AI952505, AW294197, AA844082, AI990110, AI770034, AI973154, AI381716, AA620473, AI990671, AA256663, N47503</p>
1799	HCRNV59	877167	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 420 of SEQ ID NO:1799, b is an integer of 15 to 434, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1799, and where b is greater than or equal to a + 14.</p>	<p>AA515852, AA806034, AA642399, AI804718, AA805516, AI494462, AI478789, AW236212, AA252353, AI768661, AA721744, AA761615, AA603497, AI134524, AI134110, AA252268, AI047163, AI042898, AI135012, AI042468, AI042523, AI042420, AI045327, AI045494, AI042741, AI045891, U46344, AI049280, AR066494, AI133053, AI122101</p>
1800	HCQDP52	877168	Preferably excluded from the	N94138, AI042183

1795	HBMD60	877157	<p>correspond to the positions of nucleotide residues shown in SEQ ID NO:1794, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 350 of SEQ ID NO:1795, b is an integer of 15 to 364, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1795, and where b is greater than or equal to a + 14.</p>	<p>AI630755, AA926672, N95773, AI355684, AA576604, AI081443, N73000, AI633576, AW008775, AA989509, AW009019, AI309215, AI125948, AI431758, N58382, AA136562, AA425221, H11081, AA644362, AI080504, AA449256, AA029146, AA278232, F09333, AA190919, H00311, T91257, W02964, N33940, T99623, R49537, T57253, H83423, AA969769, AA826121, AW182061, AA975401, AW235959, AI767913, Z40018, AA640099, AA932232, T49289, T56653, AA029024, T49288, AI695342, W24857, AA159950, H00358, T49319, AW134475, AA434547, T49320, AC002543, AI143419</p> <p>AL031774</p>
1796	HOGDM40	877163	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1253 of SEQ ID NO:1796, b is an integer of 15 to 1267, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1796, and where b is greater than or equal to a + 14.</p>	<p>AI459297, AA807285, AA428379, AA443512, AA808649, R73812, AA829249, R73811, AA306972, AI823917, AW296857, R34933, AI964018, R34837, AL120670, AL120664</p>
1797	HWLNG61	877165	<p>Preferably excluded from the</p>	

1792	HKAOG63	877153	<p>correspond to the positions of nucleotide residues shown in SEQ ID NO:1791, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 296 of SEQ ID NO:1792, b is an integer of 15 to 310, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1792, and where b is greater than or equal to a + 14.</p>	AA307405, AL037524, AL037501, AA126654, R97186, Z58080
1793	H2CBR38	877154	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1040 of SEQ ID NO:1793, b is an integer of 15 to 1054, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1793, and where b is greater than or equal to a + 14.</p>	AA434547, AA278232, AA029146, AA191433, H00358, R11943, H11169, Z46056, AA193396, AA405639, T99622, AA165044, W00839, R35827, AA425497, F11670, W02964, T85686, R14127, AA449385, W24857, AA313412, N77971, AW303346, AA455582, AI312533, T56653, AA905068, AA304411, AW009793, AA514453, AA587237, N77395, AA129547, AW069049, AI816925, AC002543
1794	HRDEW54	877155	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 783 of SEQ ID NO:1794, b is an integer of 15 to 797, where both a and b</p>	AW303346, AA905068, AW009793, AA193396, AA514453, AA587237, AW069049, AI816925, AA425497, AA525849, AA455582, AI309995, AI768678, AI129597, AA129547, AI922487, W00839, AI679847, AI275507, AW070298, AI816908, AA278690, AA165044, AW168777, AA456079, AI250904, AA405639, AI679273, AI399923, AA600034, AA427915, AA613020, AA723373,

1789	HCRNP62	877147	<p>correspond to the positions of nucleotide residues shown in SEQ ID NO:1788, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 471 of SEQ ID NO:1789, b is an integer of 15 to 485, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1789, and where b is greater than or equal to a + 14.</p>	AA845225, W21880	
1790	HCRM04	877148	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 551 of SEQ ID NO:1790, b is an integer of 15 to 565, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1790, and where b is greater than or equal to a + 14.</p>		
1791	HGBHE60	877149	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 900 of SEQ ID NO:1791, b is an integer of 15 to 914, where both a and b</p>	AI076490, AI654914, AI265931, AA218987, AA232080, AI921179, AI921200, AF110400	

1786	HWLXJ87	877143	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 570 of SEQ ID NO:1786, b is an integer of 15 to 584, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1786, and where b is greater than or equal to a + 14.</p>	<p>AR062872, A70867, AR016691, AR016690, U46128, D13509, A64136, A68321, AR060133, I79511, Z32749, U87247, AB023656, AF123263, X93535, AR008382</p> <p>AW450418, R24589</p>
1787	HSDSJ26	877145	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1319 of SEQ ID NO:1787, b is an integer of 15 to 1333, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1787, and where b is greater than or equal to a + 14.</p>	<p>AA193531, AI360026, N40228, AA459477, N93266, H85243, AI918187, AI564399</p>
1788	HCFBR55	877146	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 536 of SEQ ID NO:1788, b is an integer of 15 to 550, where both a and b</p>	<p>AI336245, AI761380, AI423423, AI367536, N81076, AA865581, AA258570, AA772622, H22025, AI565200, AI371499, AA659137, AA879034, AI423953, AI084944, U69127</p>

AW178775, D51079, AW177440, D59695, D80168, D51022, C14227, AW179328, AW377671, AW352158, AW378532, AA514188, AA305578, AW369651, D52291, D80251, D80248, AW177501, AW177511, AI905856, AA704205, C14298, AW178762, D80064, AW352117, AA514186, D80133, AA285331, AW360811, C14407, AW378540, D51097, AW375405, AW360844, D80132, AW360834, AW366296, AW360817, AW179220, AW375406, AW378534, AW352171, AW179332, AW377672, AW179023, AW377676, AW178905, AW178754, AW179024, D80439, T03116, AW177505, AW360841, AW179020, D80302, AW178909, AW177456, AI557751, AW178906, AW352170, AW177731, AW178907, AW179019, AW179018, AW178971, D80247, AW352174, D80014, AW179017, AW179004, AW179329, AW179012, AW178980, AW177733, AW378528, AW178908, T11417, D51103, D80157, AW179009, AW178914, AW378543, AW378525, AW367967, T02974, D51759, D58246, D58101, AW378539, AW178983, AW352120, AW177728, AW178774, AW178781, AW178911, AW352163, D59627, D80258, D59503, C06015, AI557774, T48593, D51213, D45260, D50981, AW378533, H67854, AW367950, Z82214, D63487, A62298, A84916, A62300, AJ132110, Y17188, AR018138, X67155, A67220, D89785, A78862, D26022, A25909, D34614, D88547, AR025207, X82626, AF058696, AR008278, AB028859, AB012117, Y12724, X68127, A85396, AR066482, A44171, A85477, I19525, A86792, U87250, A82595, X93549, A94995, AR060385, AB002449, AR008443, I50133, I50128, I50126, I50132, AR066488, AR016514, AR060138, AF135125, A45456, A26615, AR052274, AR066490, Y09669, A43192, A43190, AR038669, AR066487, I18367, A30438, D88507, I14842, AR054175, D50010, Y17187, AB033111, AR008277, AR008281, A63261, AR064240, AR008408,				
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1784	HWLQ015	877140	<p>NO:1783, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 600 of SEQ ID NO:1784, b is an integer of 15 to 614, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1784, and where b is greater than or equal to a + 14.</p>	<p>AI972873, N95228, AI656562, AW055145, AI936408, AI375092, AW016802, AI188610, AI985579, AI991588, AI292190, AI094172, AI078514, AI191047, R38989, AI763004, AW182193, AI830734, R49050, AA046092, AI202609, H49273, R99234, AL037112, AI262420, H19327, W87481, AW236116, N94137, AI221613, AA581541, AI521710, AA404487, AA046135, R05523, W69271, Z38912, AI468774, AA099158, AI984653, AA019723, AI554117, AI090954, AW007126, N70968, H12506, AF131754, AL035700, AC007270</p>
1785	H2CAC39	877142	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 481 of SEQ ID NO:1785, b is an integer of 15 to 495, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1785, and where b is greater than or equal to a + 14.</p>	<p>AA307078, AA706423, AA994100, AA641669, AA626714, AA770345, AI360154, AA454000, AI015598, AI470060, AI470113, AI274091, AI627230, AI784122, AI563937, AW071839, AI937059, AI348119, AI285070, AI401714, AA550934, AW078863, AI092221, AI077448, AI139979, AA229891, AI192689, AA745669, AA614661, N51519, AA661859, AA483292, AA873127, AI002451, AI568443, AA074240, AA627279, AA451794, R96077, AA767360, AA451795, R96116, AA579733, AA328053, R44546, AI832484, AA393453, AA229890, D51799, D80166, D59889, D51423, D59619, D80210, D80240, D80253, D59859, D58283, D59927, D80212, D80188, D80227, D81030, D80195, D80219, D57483, D80391, D59610, D80043, D59502, D80038, D80022, D80196, D80269, D80164, D59275, D80366, AA400769, D80193, D80241, D59787, D80024, D80045, D50995, D50979, C14389, C14429, D80378, T03269, C75259, C14331, AA888120, C15076, C14014, D59467, D51060, AA305409, D80134, AW178893, D81026, D80268, D51250, F13647, D80949, Z21582, D58253, D80522, D81111,</p>

1781	HWLRC68	877137	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 534 of SEQ ID NO:1781, b is an integer of 15 to 548, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1781, and where b is greater than or equal to a + 14.</p>	<p>AC005594, AC008975, Z68756, L48038, Z75890, AC004076, AF107045, AL096703, AC004508, Z94801 U55042, AJ249706, AF184153</p>
1782	HWLQM8 8	877138	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 553 of SEQ ID NO:1782, b is an integer of 15 to 567, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1782, and where b is greater than or equal to a + 14.</p>	<p>W73224, AI804267, AI379725, AI636783, AI351006, H98536, AI365217, N35469, AI219083, AI221578, AA476333, AI687408, AC007285</p>
1783	HWLMG4 0	877139	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 523 of SEQ ID NO:1783, b is an integer of 15 to 537, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	<p>AI741535, AI968175, AI970276, AI991566, AW025923, AI652906, AW188858, AI637887, AA516176, AI917709, AI631638, AI625029, AI342081</p>



	AC004518, AC007110, AL031321, AC004678, AL117339, AF217403, AC005190, AP000277, AC002133, AC006167, AP000281, AC005251, AC003077, AP000008, AP000105, AP000037, AC002115, Z95113, AP000704, AC002529, AC002465, AC009069, AC007406, AP000511, AC006121, AL080276, AL049712, AP001053, AL023799, AL031985, AC004961, AC005207, AC010077, AC004139, AC020663, AC007066, AC003109, Y15083, AC002299, AC005104, AC006076, AB020859, AC007878, AC005320, AC004562, AL132799, AL023578, AC005065, AC006251, AC006275, AL022334, AC004623, AL031223, Z99289, AC006316, U91322, AF207550, AC004477, AC007371, AC006131, AC012599, Z99297, Z97832, AL049839, AL133163, Z73429, AC005184, AC002044, AC004150, Z93930, AL049776, Z46936, AC005579, AL121767, AC004134, AC005015, AP000227, AB004907, U89335, AC005218, AC004131, AC006130, AL022322, M94081, AP000087, AF042089, Z97054, AC004231, Z97989, AE000661, AC004858, AC005924, AC006162, AC004074, AL031587, AC005911, AJ006997, AC005393, AF165926, AC004757, AL022725, AC003665, AC009247, AL034343, AC004832, AC002996, AC004922, Z99716, AC000353, AC005776, AL139054, AL023876, AC004513, AC004773, AL136295, AL008710, AC002077, AC012627, AL034553, AC006132, AC009516, Z94802, AC005277, AF064863, AC002064, AC006238, AL021307, AC004921, AL035587, AC005523, AC005261, AC004030, AL031678, AC004998, AC005209, AL135744, AC007225, AL050341, AL034429, AL137100, AC006600, Z95114, AL022723, X77331, AC007064, AP000359, AL021918, AC004856, AB023050, AC004602, AC003043, AB009422, U80017, AC006211, AP001058, AC005175, AC013256, AC002997,

BNSDOCID: <WO\_\_0122920A2\_I\_>

1778	HCQCR68	877133	<p>NO:1777, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 545 of SEQ ID NO:1778, b is an integer of 15 to 559, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1778, and where b is greater than or equal to a + 14.</p>	T87566, AW389691, AA505395, R15971, AL022069
1779	HEPNB10	877134	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 772 of SEQ ID NO:1779, b is an integer of 15 to 786, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1779, and where b is greater than or equal to a + 14.</p>	AI268381, AI240658, AI302971, W87782, H02333, AW022594, X82877, A36408, X64315, X82876
1780	HWLN36	877135	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 674 of SEQ ID NO:1780, b is an integer of 15 to 688, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	<p>Z78283, R11554, N44978, AA321699, AA661583, AW275432, AL048969, AI801563, AA640305, AA666295, AA676592, AA483966, AI268826, AW151247, AW021674, AI174703, AA601376, AL048060, AL048090, AI572680, AI570067, AI370470, H93717, AA846944, C06151, AA469230, M77888, AI224583, AI242994, F29968, AA829565, AI039257, AA180056, AI090377, AI791659, AA723132, AA831426, AA525753, AA630476, AA113757, AA493245, AW275640, AI292275,</p>

1775	HCQAK62	877130	<p>NO:1774, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 409 of SEQ ID NO:1775, b is an integer of 15 to 423, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1775, and where b is greater than or equal to a + 14.</p>	W86771	
1776	HCQDP71	877131	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 657 of SEQ ID NO:1776, b is an integer of 15 to 671, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1776, and where b is greater than or equal to a + 14.</p>	AA595817, H30539, AW022133	
1777	HE9PB28	877132	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1765 of SEQ ID NO:1777, b is an integer of 15 to 1779, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	<p>AW183176, AI338542, AA687408, AI335604, AA902163, AI741694, AA954272, AA742379, AI092736, AI826540, AI675475, AI079357, AI932722, AW196794, AW028184, AA091428, AW297724, AI678998</p>	

1772	HW/MBC9 4	877123	<p>NO:1771, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 382 of SEQ ID NO:1772, b is an integer of 15 to 396, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1772, and where b is greater than or equal to a + 14.</p>	AA366950	
1773	HW/LMS73	877126	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 772 of SEQ ID NO:1773, b is an integer of 15 to 786, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1773, and where b is greater than or equal to a + 14.</p>	<p>AA527435, AW195324, AI653000, AW051613, AA514619, AI652532, AI675204, AA435717, AI659333, AI796596, AI273289, AI880669, AI826786, AA889355, AW004627, AA397980, AC002302</p>	
1774	HFAMB70	877129	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 662 of SEQ ID NO:1774, b is an integer of 15 to 676, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	H10992, AL080276	

1771	HCRNE77	877122	<p>AW177722, AW378533, AW177728, D58101, D59317, T02974, AW367950, T03116, AI905856, D58246, D45273, C14407, AW178781, AI525917, AI557774, AI535959, D59695, C14973, AW378539, C14344, D60010, AI535686, AW178986, D51221, AI525227, D59474, T03048, D60214, AI525920, C14957, C14046, AW378542, AI525235, C14298, AI557751, AW177734, D80168, AI525242, AW179011, D52291, AI525925, AI525912, D51213, AA285331, AI525215, C16955, AI525237, D51097, D31458, C05763, Z33452, AI525222, Z21582, AI525928, AW360855, T02868, H67858, D80949, C04682, AB028859, AJ132110, AR008278, A84916, A62300, A62298, AR018138, AF058696, A82595, X68127, AB002449, AR060385, X67155, Y17188, D26022, Y12724, A25909, A94995, A67220, D89785, A78862, D34614, AR008443, I50126, I50132, I50128, I50133, D88547, AR066488, AR016514, AR016808, AR060138, A45456, A26615, AR052274, X82626, A43190, I14842, Y09669, A43192, AR038669, AR054175, AR066487, A30438, AR025207, Y17187, A63261, A70867, D50010, AR066490, AR008277, AR008281, AR062872, I18367, AR016691, AR016690, U46128, I82448, I79511, AR008408, A64136, A68321, AB012117, D13509, AR060133, AR066482, AF123263, A85396, D88507, A44171, AR032065</p> <p>N46730, N47731, AC005272, AC005826, AC006379, AC007276, AC004800</p>
			<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 720 of SEQ ID NO:1771, b is an integer of 15 to 734, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>

1770	HCYBJ73	877121	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 629 of SEQ ID NO:1770, b is an integer of 15 to 643, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1770, and where b is greater than or equal to a + 14.</p>	AL119464, AL036774, AL036733, AL036998, AL037178, AL036238, AL037615, AL037027, AL036719, AL036765, AL036191, AL036679, AL036158, AR060234, A81671, AR066494, AR023813, AR064707, AR069079, AR054110, AB026436 R18987, R17194, AA305460, Z45206, F08022, W86585, F07327, D50979, D80164, D80227, D80522, D80269, C14389, D59502, D81026, D80133, D80195, D51060, D80248, D59610, D59467, D59275, D58283, AA305578, D80188, C15076, D80366, D59859, D51022, D80022, D80038, C14331, D80166, D80043, D50995, D51423, D59619, D80210, D51799, D80391, D80240, D80253, D59787, D81030, D80241, D80212, D80193, D80196, AW377671, D80219, AA305409, D80045, AA514188, D59927, D80251, D57483, D80378, D59889, D80024, C14014, C06015, AW360811, D80268, AW177440, D80302, AA514186, AW378532, D80439, D59373, C14429, AW178893, D80247, D51103, AW375405, T11417, T03269, AW360834, AW179328, AW366296, C75259, AW360844, AW378528, AW360817, AW375406, AW178906, AW378534, AW179332, AW377672, AW179023, AW178905, D59653, AW177501, AW177511, D80157, C05695, D51759, AW352171, AW377676, D80132, AW178762, AW352170, AW177731, AW178907, AW179019, AW179024, D58253, F13647, D80134, D51250, AW367967, AW176467, AW360841, AW177505, AW178775, AW378525, AW369651, AW179020, AW178909, AW177456, AW179329, AW178980, AW352158, AW178914, AW177733, AW178908, AW178754, AW179018, T48593, AW352117, AW378543, AA514184, D80014, D45260, D51079, H67854, AW179004, D59551, D81111, AA809122, AW178774, AW179012, C14227, D59503, AW352120, AW378540, AW352163, D80258, D80064, D59627, C03092, H67866, AW179009, AI525923, AW178911, AI910186,
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1768	HJAM74	877119	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 439 of SEQ ID NO:1768, b is an integer of 15 to 453, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1768, and where b is greater than or equal to a + 14.</p>	<p>AL119319, AL042433, AL042965, AL042975, AL119483, U46341, AW372827, AL042614, AL119484, AL119363, AL119391, AL119444, AW363220, U46347, AW384394, U46351, Z99396, AL134528, AL043011, AL043019, AL043003, U46346, AR060234, AR066494, A81671, AR054110, AB026436 AA026806, AI243595</p>
1769	HHMME78	877120	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 622 of SEQ ID NO:1769, b is an integer of 15 to 636, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1769, and where b is greater than or equal to a + 14.</p>	<p>AA215535, AA453055, Z99396, AL119522, AW392670, AW384394, AW372827, AW363220, AL119497, AL119335, AL119443, AL119319, U46349, AL119483, U46350, AL119457, AL119324, U46341, AL119484, AL119363, AL119391, AL036418, AL038837, AL119341, AL119355, U46351, AL119496, AL119396, AL037051, AL036725, AA631969, AL036858, U46346, AL119418, AL134524, AL042614, AL119444, U46347, AL134528, AL042975, AL038509, AL039074, AL119439, AL037205, U46345, AL134518, AL036924, AL042965, AL119399, AL134533, AL042970, AI142137, AL042984, AL119488, AL042551, AL134538, AL037094, AL037082, AL037526, AL042450, AL036196, AL037077, AL037639, AL037085, AL039564, AL042544, AL043019, AL042995, AL043029, AL134542, AL042542, AL042896, AL036767, AL036190, AL043003, AL036268, AL038851, AL038520, AL038447,</p>



1993	HMWIR85	888153	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2985 of SEQ ID NO:1993, b is an integer of 15 to 2999, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1993, and where b is greater than or equal to a + 14.</p>	A44171, A85477, I19525, A86792, A82595, U87250, X93549, A94995, AR060385, AB002449, AR016808, AR008443, I50126, I50132, I50128, I50133, AR066488, AF135125, AR016514, AR060138, A45456, A26615, AR052274, Y09669, A43192, A43190, AR038669, AR066487, AR066490, A30438, I18367, D88507, I14842, AR054175, AR008277, AR008281, D50010, Y17187, X64588, AB033111, A63261, AR064240, AR008408, AR062872, A70867, AR016691, AR016690, U46128, D13509, A64136, A68321, AR060133, I79511, Z32749, U87247, AB023656, AF123263, X93535, AR008382 AA195033, AW150723, AI805372, AI826894, AW245532, AW250255, AW269478, AI929681, AI814415, AI984552, AI081263, AW178616, AW352048, AW352014, AW250589, AW178530, AI688093, AW352019, AW178493, AW178640, AA861507, AW178500, AI146435, AW178537, AA514698, N51685, AW352042, AW352039, AW366094, AW352051, W44438, AW178535, AW178604, AI608989, AW178504, AW352041, AW352035, AA936386, AA573323, AW178641, AW178529, AI566475, AA928767, AI963685, AW178642, AA826410, AW178605, AA648798, AA250731, AW178506, AI360338, AA865431, AI342420, AI439684, AI351346, AI039102, AI355698, AI870134, AI308956, AI820041, AW178495, AA502283, AI015535, AI096589, AI683046, AI884370, AI473866, AW178634, AW178667, AA495743, AW178531, AW178614, AA196630, AA533557, AA122301, AI090332, N53164, AA024938, AW178637, AI370758, AW178536, AW366100, AI832020, AI859889, AI571925, AI274028, AA024855, AA206040, AA583100, AW178507, AW178533, AW178615, AI289830, AW352018, AA636082, AW178672, AI220039, AA654736, AI831555,
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1994	HCRPV38	888254	Preferably excluded from the	AW246444, AI080500, AW352027, AW366090, AA467947, AW178499, AA722956, N59119, AW366110, AW178511, AI289407, AA478574, AW366108, AW366085, AW178670, N93845, AA640678, N35617, AW366113, AA665800, AI971078, AW352022, AA482749, AW366082, T35187, AA187140, AA732528, AL040485, AI699027, AL048191, AL048192, AI357406, AI446512, AW366088, AI655160, AA478709, AW178516, AA759075, AW366107, AA313616, AA122275, AW178503, AI970947, AW130860, AI051515, AW366098, AA651674, AA211795, AA211028, AW366081, AW366095, R56468, H72835, AI300727, N58601, R56467, AA471174, AW366092, AA074578, AA173306, AI867698, R43285, AW366087, T36005, R17987, AI370429, H72389, Z25130, AA196912, AA494312, AW178538, F08926, AA313413, AA636095, AA173215, AL135270, AW352028, W44497, F11265, AI929035, AA828212, AI289815, AA456024, T85429, AA253435, W40299, AW178505, AW249489, AW178527, AA181660, T35188, AW178492, AA367321, AW178631, AA332841, Z41942, AW178633, AW178630, AI250164, AA922875, AI634989, T83973, T85838, Z28803, AW178644, T74206, H78935, H80408, T35534, T74205, F15248, H80409, AA471318, H71931, AW352024, AW352025, AI767357, AI915730, AA214391, W26819, N51783, T90953, T35336, H91061, AW351670, N56034, AW178526, T35316, F15255, R18867, AW352033, AI274653, AA092564, R43478, AA480524, R37293, AW366117, AA580662, AW178494, AA404508, R18915, AI587130, AW178674, W27395, T81825, AA258411, AA455384, AA370020, AW178518, AW366099, AA903360, AF046001, AC005899, AB013357, X74802, Z58362, Z62704, AA035153, AA195198, AA747754, AA878252
				W68102, AA005326, AA447946, AA101751, W67683,

			<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 324 of SEQ ID NO:1994, b is an integer of 15 to 338, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1994, and where b is greater than or equal to a + 14.</p>	AA889641, AF057172, Y11151, AP000351, AP000350, Z84718, AP000352, AF057173, L38503, D38556, D10026, U48419, U48420, X98056
1995	HSRBB92	888402	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2332 of SEQ ID NO:1995, b is an integer of 15 to 2346, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1995, and where b is greater than or equal to a + 14.</p>	AI992179, AW188159, AI926499, AI926498, AI763400, AI421095, AA862284, AI720384, AI869696, H38016, AA831687, AA307183, AI018137, AA486789, AA974505, AI090091, AA452882, AA884683, AI740894, AA432181, AA159901, AA918138, AA758089, AA974498, N21230, AA905692, AI123002, AI923636, AI361685, AA431160, AW188033, AA664029, AW366681, AI318079, AI015094, AI125440, N27905, AI239567, AI720492, N27509, W70189, AA129411, AA486964, AA047262, AA745630, AA962542, AA622987, AA761345, AI476363, AW361963, AA165010, AA136547, AA826442, W27215, AA173158, AI358157, H53700, AW407265, AA953388, N21070, AA768158, R51769, AA515123, AA063525, R70834, AI220536, F37121, AA845912, AW407373, W22674, AI381262, R51770, R32559, W70062, H53699, Z40510, AA854028, AA214484, AA905868, T81857, AA831837, AI497849, AI936784, AI184454, H65537, W02660, W25730, AA908937, C02652, AA355806, AA883739, C03254, W23216, R91464, AA983747, F24286, AI091283, AA040178, AI221931, AA632020, AA680078, R70782, AW340183, N63460, R72023, AA214403, AI910370, AA359073, AA969208, AA977551, AI292225, AA993649, AI828995, Z44657, AA359273, AA057148,

1996	HSYEA10	888523	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2007 of SEQ ID NO:1996, b is an integer of 15 to 2021, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1996, and where b is greater than or equal to a + 14.</p>	AA707548, AW340816, AA613385, D61871, H38242, H81487, AI218047, AI190091, AA453052, AW138451, AW294322, AW452108, AI766143, AW140098, AI832222, AW292106, AJ271408, AF132938, AF106798, AL133631, AR007449, U39643, AF094700 AI037890, AW003999, AI858060, AW084608, AI589010, AW304188, AW117854, AI038497, AI452673, AI743739, AI147810, AA181048, AA187507, AA081006, AA082736, AA187264, N94407, AA187361, AA181882, AI079886, AA181880, AA188249, AI445147, AI471432, W49496, AA100829, AA503656, AA081230, AA182826, W47343, AA182830, AA181134, AI085755, AA132297, AI076956, AI613182, AA081149, AA188049, AA186634, AI081490, AA186808, AI918426, AA186376, AA081282, AA082516, AA186389, AA081208, AA582862, AA147528, AA157628, AI082493, AI282835, N94510, W49497, AA181875, AA191501, AA083542, AA157752, W47445, AA101069, AA186754, AA081283, AA182682, AA186393, C06085, W39354, AI800644, AA157468, AA186973, AA374217, AA386155, W23960, T27821, AA083575, AI654536, AA308204, W52714, AA852603, AI270203, AA188296, AA852324, AA852602, AA143331, AW449628, AA083541, AA372360, AA158121, AA186524, AA304334, AI932880, AA187348, W60270, AA308786, AA188042, AA157416, T18504, AA143201, C02231, C02091, AA156273, AA157642, AA100067, W56826, W56827, AA514656, AW376428, W31070, AW376420, AI912469, X54925, X05231, I01070, AF148882, X54724, X58256, A47086, U78045, S75623, M17821, M15996, M17822, M17823, M16567, U78629, AJ002550, M25663, AR040773, AF023338 AW368993, AI638166, AW297766, AI041204, AL042348, AI478737, AI760185, AI830441, AI126299, AI217176, AI092924, AI799277,
1997	HE2CC22	888673	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a</p>	

			<p>nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1941 of SEQ ID NO:1997, b is an integer of 15 to 1955, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1997, and where b is greater than or equal to a + 14.</p>	<p>AI857759, AA993596, AI381442, AI620345, AI027099, AA743334, AI827435, AI138805, AA136171, AI285950, AI635387, AA664373, AI827427, AI015864, AI222122, AA843185, AA976953, AW021642, AI685358, AW195005, AI206601, AW023027, AW450169, R80985, AA813995, T78995, AA912496, AA926963, AW451943, AI249890, AW269181, AW026792, R68431, AA731014, AW074050, AA922059, AA757551, H12605, AA689507, W79832, AA412149, AW135157, AW071659, R49066, AA056573, AA278795, H91438, AI567760, H12655, AA804916, AA040923, AA721747, T78939, Z41658, AI767505, AA766306, AA987389, AI538809, R68430, R26542, AA056678, AA353814, H91332, R80785, R25352, AA361014, AA536104, AI699602, R57916, AA278600, AA040922, AB007949, X65024, D21089</p>
1998	HOUAC22	888708	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1144 of SEQ ID NO:1998, b is an integer of 15 to 1158, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:1998, and where b is greater than or equal to a + 14.</p>	<p>AI821479, AI739517, AW082828, AA533173, AI198451, AA532999, AI821509, AI791624, U25936, AA315607, AI000331, AW139172, AA358875, AI125295, AI216275, AW005074</p>
1999	HHECU01	888720	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1113 of SEQ ID NO:1999, b is an integer of 15 to 1127, where both a and b</p>	<p>AA853396, AC005041</p>

				correspond to the positions of nucleotide residues shown in SEQ ID NO:1999, and where b is greater than or equal to a + 14.	
2000	H2LAP34	888783		<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 464 of SEQ ID NO:2000, b is an integer of 15 to 478, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2000, and where b is greater than or equal to a + 14.</p>	AA314278, AA315476, AA133008, AW301013, AA314092, AA386092, AA411572, AA427682, AA315987, U46281, W76038, W42816, AA314613, AA477668, H52355, C17482, AA477851, AA481359, R83104, AA410758, W02292, W79944, AA329443, R46315, W07627, AW366382, AA335138, R83126, AA302305, W19402, H27934, AA659027, AA411998, AA151635, AA366470, AA358810, AA053648, T49358, AA378171, R48529, AA159070, AA838273, T62103, AA429117, AA158752, AA134180, AW376226, AA149262, AA410673, U92985, AR065358
2001	HNTAR08	888950		<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1247 of SEQ ID NO:2001, b is an integer of 15 to 1261, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2001, and where b is greater than or equal to a + 14.</p>	AW236102, AA218985, AA906740, AA737950, AA220991, AA926805, AA206111, AA206112, AI653195, AA865714, AA220997, AA968722, AA218991, AI962654, AI357043, AI652879, AI970161, AW025944, AA902285, AI655507, AW003483, AA902779, AI824839, AI917697, AI671508, AI962316, AA074560, AR040708, S52658, AR040709
2002	HWLWH6 6	889136		<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1517 of SEQ ID NO:2002, b is an integer of 15 to 1531, where both a and b</p>	AI694583, AA280341, AW369780, AI572844, AA968512, AI250884, AI798375, AI370669, AW181892, T06923, AW293265, AA947819, AA598509, AL035420, AL050030, AL022727, AC004129, AC005082

2003	HWLC112	889263	<p>correspond to the positions of nucleotide residues shown in SEQ ID NO:2002, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2319 of SEQ ID NO:2003, b is an integer of 15 to 2333, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2003, and where b is greater than or equal to a + 14.</p>	AI632964, AA826324, C06338, AI547059, AA622862, AI890787, AA775044, AA621523, AA585439, Z28355, AI525556, AI541374, AA585453, AI535639, Z30131, AI546999, AI546855, AI541514, AI525316, AI541510, AI525306, AA585101, AI541523, AI557731, AA585434, AI541534, AI541365, AI526140, AI541509, AI546828, AI525431, AA585440, AI556967, AI526194, AI541017, C15189, AI540967, AI547039, AI557262, T11028, AI557807, AI541535, C16300, AI557799, AI541205, AI546945, D61254, R29445, AI541307, AI535813, AI557787, AI546899, AI557238, R28735, AL040510, AL040625, AL045817, AL041142, AL041238, AL041133, AL047183, AL040322, AL041131, AL046330, AL041051, AL041292, AL040119, AL047036, AL047170, AL047057, AL047219, AL041227, AI525653, AL040463, AL039915, AL043612, AL041197, AL040155, AL041346, AL040529, AL041096, AL047012, AL041358, AL041277, AL041163, AL041098, AL040621, AL043538, AL041324, AL040464, AL044162, AL041086, AL043496, AL041296, AL041233, AI526180, AL043467, AL041159, AL045725, AL044186, AL041140, AL040193, AI557082, AI526196, AL044037, AL040091, AL040128, AL040168, AL040255, AL040285, AL040342, AL040332, AL040617, AL040553, AL045684, AL040745, AL040370, AL043677, AL046442, AL040839, AL041752, AL040149, AL043775, AL044165, AL043492, AL041602, AL045920, AL041278, AL038838, AL040253, AL044074, AL041635, AL045990, AL040458, AL044199, AL044187,
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	AL040090, AL040263, AL040294, AL040329, AL040082, AL044272, AL041186, AL040148, AL041730, AL041523, AL043627, AL046392, AI525320, AL041374, AL040052, AL043845, AL043537, AL039338, AL042135, AL044064, AL038983, AL039316, AL043923, AL043814, AL043848, AL041459, AL043570, AL041577, AL044258, AL044201, AL046850, AL038532, AL040768, AL037727, T23985, AL040576, AL046994, AL040414, AL040571, AL046914, AI142134, AL045753, AL044274, AL079878, AL049018, D57491, AL040444, AL039744, AL045857, AL038822, AI541508, AL045671, AL046327, AJ239433, AL041168, AL049069, AI557796, AI546891, AL043444, AL041246, AL040472, AI546875, AI535660, AL040238, AL041955, AL041347, AL038761, AI541048, AL040075, AA585476, AA585356, AI540920, T23957, AI526184, C16305, T41289, AL080031, AI541013, AL045989, AI536138, AL046147, R29177, AI526073, T23888, AI557155, AI541345, AL042096, AL037436, AL044529, AI525328, AI526187, AL039643, AI525203, AL037435, AL039360, AI557808, AI541415, AL044125, AI557279, D55233, AI541390, AA174170, R29218, AL079852, T18597, AI525339, AI557802, AI525856, AL045211, AI541356, AI525321, AI526195, AI541346, AI541506, AR017907, A25909, I13349, AR062871, A91965, AR038855, I18895, AR062872, AR062873, AJ244004, A85395, A85476, AF082186, AJ244005, AJ244003, A20702, A43189, A43188, A20700, AR037157, X81969, I63120, A98767, A93963, A93964, A98420, A98423, A98432, A98436, A98417, A98427, Y16359, AR008429, AR038762, D78345, I44681, A86792, A93016, X83865, A84772, A84776, A84773, A84775, A84774, AR054109, AR067731, AR067732, A58522, A91750,



	<p> A18053, M28262, I15717, I15718, E03627,  AJ244007, A58524, I49890, I48927, A58523,  A02712, A77094, A77095, I84553, A81878, A95051,  I84554, A18050, A23334, A75888, I70384, A64973,  A60111, A23633, AR007512, I08396, I00682,  A11623, A11624, E00609, E13740, A11178, E01007,  A10361, A60212, A60209, A60210, A35536, A35537,  A60211, A02135, A04663, A02136, A04664, I62368,  I08395, I06859, AR043601, A11245, U94592,  I03331, A02710, E12615, AR035193, E14304,  A07700, A13392, A13393, AR031488, I13521,  I52048, A27396, AR027100, I44531, I28266,  I21869, I44516, A70040, E16678, A82653, E16636,  A24783, A24782, A92133, A95117, A90655,  AF149828, I01995, I08051, AR031566, I25027,  I26929, I44515, I26928, I26930, I26927, I60241,  I60242, E00697, A20699, E03813, I66482,  AR009151, I66485, I66483, I66484, I66498,  I66497, I66496, AR027099, I66487, I66486,  AR038066, E00696, AR051652, AR051651, Y09813,  Z32836, AJ230935, D50010, AJ230902, I66495,  I66494, I05558, AJ230972, I66481, A83642,  A83643, I66488, I66489, I66490, I66491, I66492,  I66493, A83151, AJ230951, AJ231009, A22738,  I08389, X07299, A70872, D13316, I19525,  AR035975, AR035977, D13509, AB025273, I18302,  AR051957, A70869, E12584, AR035974, AR035976,  AR035978, AC005913, E17098, AJ231028, A91752,  A22734, AR022273, AJ230867, AR064707, AR054723,  A32110, AJ230845, I36244, AR051864, AF006072,  X55486, AR051865, A06631, S60422, A62298,  AR009152, AR050070, X82786, AJ231011, U87250,  Z30183, A68112, A68104, A82595, A82593, I15353,  AR063812, A24548, A24546, Y14219, AR027319,  A91751, AR027318, A06419, A21892, A23997,  A68114, A89633, A89634, A21895, A05160, A08030, </p>

2004	HNGEF72	889299	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2385 of SEQ ID NO:2004, b is an integer of 15 to 2399, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2004, and where b is greater than or equal to a + 14.</p>	<p>A20502, X87559, I05488, I61310, A60961, A60977, AR002333, A60985</p> <p>AL044543, AI791864, AI792362, AI887776, AW118108, AA132199, AI110605, AI239787, AI805055, R71461, AA306731, AA034255, H53686, AI741660, H82553, N28450, AI452969, AA318128, C16668, H49190, AW043837, AA251931, AW051344, H43461, AI167640, AA001337, AA025373, AI082161, H27161, AA328744, AI203499, AA156782, U25759, AA303132, AI638569, AI052532, AA091675, R99679, AI278003, AI720617, AW051583, AA804776, AA319103, AW148694, AA029525, AW247858, AW021737, AI140193, AW055259, AA565273, AA642437, AI240825, AI248594, H72148, AA156851, AA573394, AA029460, AA359482, T50440, AA018596, AA214611, AA634569, AA725707, AA709248, AA536183, AW082332, AA361479, AA447253, AA447268, AA353770, AI567232, AA962385, AA709244, AA767996, AI766591, AI358947, C18192, C16865, AW193910, AW235731, AA707012, AW304793, AA352835, AI939507, R10615, AA382271, AI061368, R08159, AA669229, AI085658, T91022, AW206558, R86259, AI276029, AI561192, N74387, AA131938, N74439, AW439563, AA013432, AI753280, AI267829, AI189108, W04994, R28492, N52383, T85708, AL031769, AC007970, AL034426, AC005697, AC002065, AC008082, AC006010, AC009286, D87009, AC009241, A90827, Z92545, AC009399, AJ243211, AL022400, AC004460, AL021917, AC004382, AC006522, AC007270, Z99569, AC005323, AC006083, AC005681, AC007788, Z98751, AC005731, AC000085, AL031684, AC009396, Z97180, U40455, AL117351, AC006024, AL109954, AC009514, AC006500, AL132994, Z98172, AC002094, AC004553, AC004993, AC006153, AC005488, AL034347, AC003681, AL109654, U66083, AF109718, AC004844, AL031672,</p>
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			AC006151, AJ006995, AC006518, U82672, AL078643, AL021878, Z98748, AC000100, AL023806, AL035409, AC007002, Z81009, AC002523, AC007967, U82696, AC006084, AC004875, AL133162, AL133216, AC004909, AC009300, AP000154, AP000012, AC002497, AC006007, AC006080, AC000055, AC010168, AL035534, Z86064, AC003046, Z82170, AC005006, AE000659, AC005157, Z83745, AL132776, AC006166, AC003086, AL109922, AC006957, AB023051, Z77853, AP000512, Z97206, Z77249, AL110292, AL136295, AL121756, AB026899, Z84478, AL022318, AC004006, AC006062, Z84486, AC004112, AP000500, AC006370, AC007786, Z95114, AB019440, AF064859, Z95115, AC007253, AC006484, AC006262, AL021408, AL021997, AL031683, Z84718, AP001068, AF064858, AC004948, AC006504, AC007785, AP000542, AC006366, AC004047, AP000351, AC006017, AJ011932, Z84814, AC011422, AP000350, AC005562, AJ011930, AL109985, AC005010, Z98949, AC008170, AC007151, AJ239321, Z98304, Z80361, AC010436, AC007030, Z95703, AC006118, Z72001, AL022160, AB003151, APQQQ688, Z83839, AC005534, AL034399, AF000573, AP000689, AC002386, AC003029, AC005228, AC005185, AC009946, AC007099, AL031662, Z75889, AL034421, AC004825, U80460, Z95152, AC006840, AC005870, AC007999, AE000658, AP000352, AC005886, AC005365, AL080317, AL132800, AC004385, Z84470, AC002449, AL008729, AL117339, AL023799, AC003082, AF205588, Z96050, AC007878, AL049766, AC005326, Z72004, AL035688, AC002485, Z99716, AL049813, AC004924, AC005066, AF090890, Z93931, AC007676, AL009028, Z72522, AC005145, AC004551, AL133249, AC005252, AF198098, AC005945, AC018633, U85198, AC004662, AC004474, AE000661, AC007751, AC004095, AC006036, AC009181, Z98753, AC006968,
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2005	HKAEB46	889300	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1902 of SEQ ID NO:2005, b is an integer of 15 to 1916, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2005, and where b is greater than or equal to a + 14.</p>	AL031116, AL109748, AP000078, AC007455, AL031586, AC002349, AL022574, AC004872, AL031393, AC004452, Z99497, AL137624, AL079342, AB020871, AC006463, AC006984, AC006167, AC004389, AC004915, AB023050, AP000511, Z96774, AC002085 AI952777, AI346020, AW024883, AL046029, AI590661, AI346915, AW073186, AW237522, AL037668, AW151753, AI419538, AA399154, AI420960, AA971504, AI424070, AI983928, AI858710, AW264165, AI970601, AI422333, AA610484, AA481014, AA758319, AA486535, AI273879, AA865664, AA528037, AW440638, AI804913, AI094960, AI051129, AA975822, AW367514, AA043942, AI337380, AA470886, AA450210, AA737971, AA045559, AL037667, AA292222, AI914093, AW022153, AA620519, AA451613, AA252687, AA551664, C17369, AI953410, AI359851, AA045558, AA135778, D58604, AW402976, AI423638, AA486630, AI189228, AI003695, AW002772, R91050, AI261994, D63187, AI758843, AA728996, H02570, D78861, AI431974, T95753, AI768841, AW369981, AI374732, AA503361, AA298895, AI908249, AW392006, AA962314, AW392196, AW392074, N30487, AW392085, H52318, AA296893, AA303066, AW392190, W35300, AA031634, R76869, AA298088, T95752, AW391941, AI864825, Z45938, AA135734, N71976, AA296872, T84519, R76870, AA366382, T81251, AA041548, C18136, R32692, H02653, C16129, T10828, H52227, R34136, C17067, R23164, AW392168, R23163, AI687114, R63893, AW392170, R06245, AA031753, T99872, AW392082, AA976000, AA890237, R99970, AW238952, AI719088, AA365961, AA302997, H03271, AA894778, R06300, R91051, D20914, W32904, AI571626, AA719590, AW386001, AA931929, R68979, AB011145,
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2006	HNHON23	889323	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1059 of SEQ ID NO:2006, b is an integer of 15 to 1073, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2006, and where b is greater than or equal to a + 14.</p>	<p>AR025393, AR025401, AR025424, AR025397, AR025407, AR025415, AR025421, AR025405, AR025404, AR025414, AR025423, AR025416, AR025417, AR025422, AR025402, AR025394, AR025400, AR025413, AR025403, AR025418, AR025412, AR025395, AR025410, AR025411, AR025409, AR025419, AR025396, AR025408, AR025399, AR025420, AR025398, AR025406</p> <p>AA313697, AA397662, AI734131, AA428728, AI734102, AI741547, AA428294, AW274830, AA428330, AI732698, AI742282, AA428855, AA452415, AW246994, AI337011, AI650992, AA910985, AA934713, AW452736, AI685505, AW025662, Z38485, AA724506, AA703833, AA315349, AI653134, AC000378, AL080194</p>
2007	HSKES11	889368	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 3697 of SEQ ID NO:2007, b is an integer of 15 to 3711, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2007, and where b is greater than or equal to a + 14.</p>	<p>AI125788, AL135619, AI683334, AA824310, AL135408, AA037216, AI972586, AI718476, AI829067, W58485, AA497128, AW051854, N28502, AL121373, AI922174, AA524333, AW084782, AW402881, AI199668, AI143639, AW327327, AI688325, N42979, AI333116, AI697771, AI243863, AI003784, AI084638, AI937411, N29140, AW269389, AA443395, AW001384, AI355311, AI139563, AI374602, AA424444, AW169876, AI335174, AI671042, AW327648, W24329, AI050862, AI628040, AA434140, AA082441, AI362701, AA884252, AI090258, W56128, AI081404, AA814863, W58450, AA814576, AI907488, AA461502, AA223732, N95448, AI184687, AI050684, AA447362, N21176, N27576, AW341550, AA497051, AI433749, AA311905, AA505594, AA329681, AI278163, AA780160,</p>

	AA570608, AA554137, AA223721, AW271217, AI801216, AI097355, AA885099, W69597, AA889841, AA908481, AI523739, AW381678, AI359091, AA478351, AI344719, N23344, AA468529, AA235290, AI095678, AA608996, AI189320, AI633706, AA683544, AA621614, AI857314, AI348508, AI085545, AI214611, AI625313, AA476237, AA494522, W07587, AA976842, AA478293, AA643766, W46184, N35630, N33492, AA526427, N24296, AW139045, N68146, H25621, AA424346, N42480, H61788, AA935087, AL121192, AI525659, AA580160, FI9069, H61787, N20306, AI473380, AI187234, AA476236, AI766411, R83753, AA192735, AA223820, R64665, AI095388, AA316245, AW375464, H99696, AI814495, T91430, AI869777, AI750567, AI800050, AA737796, AW375583, F33001, AA402536, AI375909, R83603, N35954, AI458633, T35960, AI928703, AA460576, AA383262, C17066, F06682, W16735, AA223809, AA297837, AA876406, AA493346, AI000901, Z39693, T30460, AA961198, AA378551, AA984004, AI928185, N26258, H98726, T60304, N78786, AA482926, R45705, AA455905, AA374118, AA384020, H02406, AA456331, AI418099, AA724536, T92890, AA592933, AA995483, N90115, Z44200, AI962421, AA992353, N43882, H96512, R06697, T91342, W74107, F34857, W69410, AW139741, AA047633, Z19206, AA302221, AA374271, AI630403, AI928594, AA234873, AL135333, AA047532, AA788864, AI478732, H21536, AA318358, C02417, N66756, T61681, AW243518, C17661, Z25200, AA805109, R06557, AW050504, H21535, AA456371, AI302688, AW079809, AI080026, F04276, AA356174, N83368, AI564126, AW070903, AW004636, H26495, T92979, AW392175, AA206629, AJ251053, U14550, AC002429, AP000031, AL022336, AC005529, AC004106, AC005015, AF001549, AC003029,

	AC002045, AL031311, AL049830, AC004963, AP000501, Z82198, AC005702, AP000115, AL035089, AC005972, AC005921, AC004966, AC002404, AC006211, AL035415, Z98884, AC004953, AL024507, AC004837, AC002326, Z98200, AC005229, AC007263, AC005011, AF165926, AC005821, AL031283, AL022577, AL009031, Z98750, AJ010770, AC005988, U95740, AC007386, Z95152, AL022316, AC004990, AC008372, AC003070, AL031277, AL049780, AC006061, AC005049, AF117829, AC005081, AC002352, AC007358, U91322, AC005971, AL121603, Z93017, AC004623, AL049692, AC010170, AC002454, AC006115, AC007011, AL117339, AP000694, AL031591, AC006101, AC005482, Z84466, AC005544, AF001550, AC005538, AC007639, Z82206, AC005088, AL009183, AC005181, AC003982, AC003665, AC006120, AC007686, AF053356, AL049869, AJ010597, AC007371, AC006080, AC004887, AC002299, AC005274, AL049776, Z97054, AC006160, AC003044, AF227510, AL049694, AC005531, AC007036, AC006924, AC006130, AL117337, AP000557, AC009509, AC003971, AE000658, AC005208, AC005291, AJ229041, AL049589, AL022320, AC009464, AB016897, AP000555, AP000135, AC005288, AL096791, AC002563, AP000563, D87675, AP000512, U85195, AC007227, AL031276, AC005779, AC005066, U91326, Z84480, AL109952, AC007193, AC005527, AF205588, AC005295, AC020663, AC005046, AP000556, AC002430, AC007055, AC004859, AL034548, AL079304, AL009179, AC000085, AC003658, AC004882, AL031121, AC002316, AC004841, AL080243, Z93023, AC007052, Z95114, AP000210, AP000132, AC005620, AL008715, AC006409, AF045555, AL035249, AC007384, AC003101, AC005157, AC009247, AP000133, AP000211,

2008	HCETPO5	889467	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 454 of SEQ ID NO:2008, b is an integer of 15 to 468, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2008, and where b is greater than or equal to a + 14.</p>	<p>AP000359, AC004905, AC005736, AF165142, AC007073, AC004802, AC004477, AJ229043, Z98036, AC002485, AL096817, AL133448, AP000553, AL049745, AC005207, AP000459, Z73358, AP000100, AC006013, AP000208, AL035587, AL121655, AC009516, AC005279, AP000961, AF196779, AL031588, AC006014, AC007786, AL121754, AC005519, AP000558, AP000704, AC002544, AC006948, AC004491, AP000247, AC006947, AC006515, AC006064, AC002477, AC008273, AL049839, Z84484, AC005874, AF134471, AC004552, AL021394, AC005839, AC005018, AC006417, AP000130, AC002375, AC002126, AC005520, AC006992, AC004066, AC005701, T52888, T52889, R06558, H24699, H25574, N92900, W07212, AA062814, AA424971, AA932152, AA992342, N46317, AA454682, F04980, F08711, AI245086, AI198097, AI423663, AI123150, AI190262</p>
2009	HDHEA53	889494	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 825 of SEQ ID NO:2009, b is an integer of 15 to 468, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2009, and where b is greater than or equal to a + 14.</p>	<p>AW409600, AW370893, AW172635, H29357, H00126, AI688967, H23399, H15998, AA910184, R13385, AI635135, AA811899, AA768537, AA827197, AA152215, T33955, AA324892, H51900, AW015309, Z45802, AW138603, AW439297, AA281159, T31539, AI989451, AA311444, T33897, AA928259, AW362586, AL096745, AL133562, AB023205, AJ006417</p>
2009	HDHEA53	889494	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 825 of</p>	<p>AW162106, AI192344, AI564803, AI816163, AW157769, W30860, AW157220, AI686640, AI379866, AI917170, AA548108, AI581151, AI190572, AA479158, AI364132, AI827282, AI400087, AI271370, AA609367, AA236262, AI910788, AI148957, AA758679, AI392976, AA608963,</p>



2010	HCHAC08	889700	SEQ ID NO:2009, b is an integer of 15 to 839, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2009, and where b is greater than or equal to a + 14.	AA464601, AI634775, W07097, AI332514, AA253390, AA490370, H80788, AI024529, H21486, AI338291, N72328, AA193686, AA253494, AI240331, H20219, AA064633, AA664481, AA548109, R10906, R61486, AI970230, AI652083, AI654228, H75492, AA247266, N52829, AW139159, AA748177, R64411, H17572, AF065389, AF053455, AF121344
			Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 799 of SEQ ID NO:2010, b is an integer of 15 to 813, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2010, and where b is greater than or equal to a + 14.	W87344, W87345, AI159814, AI743733, AI027553, AW001343, AI743223, AI804911, AW009182, N71072, AI034362, AA468381, AI168829, AA468421, AA860298, AA578670, AI027557, AI365637, AA618558, AI307591, AI033866, AA052982, AA937189, AI034209, W05444, AA612975, AA053475, AA468294, AI972035, AA612979, AW004657, N58184, AA782754, AI186935, T53519, AW016322, R27278, AA988007, AA579074, AA860739, AA612976, AW406518, AI422596, F25986, AA774165, N56542, AA864684, AA922471, AA468220, AI350544, AI950616, AI142741, AA706997, C21238, T53520, AA095378, AI673154, AI905956, AI660174, T24673, F36466, AI341288
2011	HACBT96	889782	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 980 of SEQ ID NO:2011, b is an integer of 15 to 994, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2011, and where b is greater than or equal to a + 14.	AI338644, AI745184, AI890849, AW079838, AW149663, AI634926, AI889135, AW026717, AW270045, AI857571, AI052517, AI004249, AI279282, AW089862, AI499010, AA581431, AA669174, AW129569, AW438690, AA830692, AA419072, AI624275, AA434407, AI597766, AI184077, AA565719, AA758787, AI183979, AW021522, AI862132, AA705896, AI090447, AA828220, AI190867, AA435546, AA568841, AI268376, AI092061, AI146792, AI268380, AA012947, AA700657, AI160133, W90656, AA618520, AA805610, AI043849, AA902677, AI276955, AI366145, AA394012, N74351, AA076429, N92748, N74405, AA830815, AA788867, W86234, AI131041, AI636459, AI043850, AI309739, AI346161,

2012	HTLEN01	889954	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1756 of SEQ ID NO:2012, b is an integer of</p>	<p>AI339715, AW105496, AI272886, AA017217, AA191502, AA677335, AA021588, AI418190, C75356, AI460073, W17229, AA715095, AI348381, AW020236, AA548678, AL045358, AA669031, H81440, F25106, AA243179, H41079, AA433970, T03708, F37029, AA410613, AA923050, W67263, AI765605, AI354279, N89731, AA604066, AI186384, T55826, T28511, AI568300, R07512, AA862409, AI350206, R44871, H46869, H46287, AA857126, AI491735, AA687978, T74684, H75881, D25565, AA419133, AW188884, AA548866, AA305818, T26508, W86261, AI361932, AA995393, H66896, W67378, AI351723, R22493, R22441, F27665, AI245370, T74796, R53433, AA322407, T95777, AW384420, T92255, H75747, R12501, C21226, AI547271, R07565, AA326036, T74869, AI610783, T95776, AI261830, W19404, H42315, AA936763, AI907063, AW384409, AA384097, AA973381, R09900, AI865937, AA404250, AI907073, H43081, T72070, AA489164, H67138, AW264657, AA345444, T74921, AA404700, R08428, AA934685, AW392670, C04482, Z99396, AL119319, AL119497, AW384394, U46341, AW372827, AW363220, AL134531, AL119457, AL119443, AL119324, U46350, AL134920, AL119484, AL119363, AL119341, AL119391, AL119355, U46347, U46351, U46349, AL119483, AL134533, K03001, Y00109, X05409, AC003029, A93931, M20456, M26760, S80262, M54931, M20454, M20455, AF164120, AR060234, AB026436, U02317, AR066494, AR069079, AR054110, A81671, AA744759, T08846, AA884477, R87614, R18692, AW362788, AW072169, AW408220, AA078623, AA227616, AA884352, AA868332, AI762571, AA535028, AI139078, AA077934, AI361426, AI359977, AW009454, AB033050, AB015330</p>
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2013	HCROA43	889962	<p>15 to 1770, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2012, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 693 of SEQ ID NO:2013, b is an integer of 15 to 707, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2013, and where b is greater than or equal to a + 14.</p>	<p>AA878377, AW264482, AA528458, AI084502, AI086537, AA280756, AI524467, AA215387, AI909056, D20028, AI432571, T80449, C16437, AI474660, AA306817, AA636097, AA214516, R82222, AA995304, R39369, AA318653, R62525, AL045794, AL039924, AA969711, D51250, T24119, T24112, D80253, D80043, AW013814, D59787, AL037726, AL039629, AL039625, AL039648, AL038837, AL039074, AL039678, AL039108, AL039538, AL039564, AL039156, R39019, AL039659, AL039566, AL039509, D80219, AL038531, D59275, D80227, AL039109, AL040992, T80169, AL044530, AL039128, AL044407, AL038821, AL036973, AL045337, AL037051, AL045353, AL039386, AL039423, AL045341, AL042909, AL039410, AL043422, AL043445, AL038025, AL039150, AL036725, D80240, AA383146, R25163, AL043423, T02921, D80210, D51423, D80134, D59619, AL043441, R24660, D80391, D80193, T23947, H00069, D80196, C14227,</p>
2014	HSLJW05	889994	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2426 of SEQ ID NO:2014, b is an integer of 15 to 2440, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2014, and where b is greater than or equal to a + 14.</p>	

	AL039085, AL036196, D59927, AL037639, D80949, D80366, AL037615, AI535783, AW451070, D80168, AI535983, AL036767, AW452756, D81026, AL036117, T11051, D50995, C75259, C14014, AL037526, D80045, R47228, AL037104, AL036679, AI910647, AL036238, AL036924, AL037601, D59889, AI557751, AL038851, AL036733, C15076, AL036158, D80022, AL037027, T23659, AL036418, D80038, AL037082, D80195, AL037054, AL036765, D58283, D81030, T11417, D80188, AL037177, D59467, C14429, D51799, D80378, AL037081, AL036190, T03269, AL036998, AL037047, F13647, AL037643, AL036227, AW237857, T48598, AL036964, D50979, AL036207, D80522, AA514190, D80212, AL036132, AL036167, AW450376, AL037600, C14298, AL037178, AL036191, AA285331, D59502, Z21582, AL037679, D80164, D80269, D80166, AW129106, C14331, D59859, D59610, AL036152, D59695, D80241, Z25782, N71180, AL042628, AL079963, D80268, AL037124, AW071417, AL048425, AI525669, AI569616, D58253, AI468872, AI287326, D80024, AI802542, AL040243, Z99396, AL039086, AL036174, AL037021, AL036146, AI590118, AI591316, AI499285, AW129916, AI318280, AL043326, AI955906, AI932794, AI554245, AA225339, AI763414, D57483, D52291, AI541056, AW150578, AI538085, AI251205, AI308035, AI857296, AL045163, AI680498, AI288285, AI815855, AI687127, AI866573, AL135025, AL119791, AI269862, AL042382, AI866608, AI174394, AI612885, AL039276, AI340582, AI252023, AI364788, AI590120, AI627988, AI620284, AI280661, AI207510, AL121270, AW082113, AL042745, AI696626, AL121328, AW089572, AI433976, AI612913, AL045500, AI866770, AL022401, A85396, A25909, A85477, AR025207, X68127, A86792, A44171,

	A67220, I18371, AR062871, AR037157, AR017907, A84772, A84773, U87250, AR062872, A84776, A84775, AR062873, A84774, AR067731, A20702, A58522, A91750, AR067732, A43189, A43188, A20700, D34614, AR036905, AJ244003, A95051, A38214, A98767, A95117, I56772, I95540, AR018924, A95052, AR031374, AJ244004, A63067, A93963, A93964, A51047, A63064, A18053, A49700, AR018923, AR031375, A48774, I63120, A63072, AR043602, AR043603, A48775, AR043601, AR068507, A23334, A75888, I70384, AR068506, A18050, A60111, A23633, AR015960, A23998, AR000007, AR015961, AR007512, A58521, I60241, I60242, AR020969, I03343, AR054109, I06859, AR022240, A81878, A64081, A58524, E12615, A24783, AR035193, A24782, A58523, A92133, E14304, A27396, I28266, AR027100, AF118808, A49045, E16678, A82653, E16636, A93016, AB012117, I25027, Z96142, I26929, I44515, I26928, I26930, I26927, A58525, A02712, AR038762, X73004, V00745, I49890, AR000006, I19516, I44516, AJ230933, E13740, AR008430, Y11923, AR036903, A58526, E16590, A91753, A11245, A02710, A07700, A13393, A13392, I19517, A76773, A22413, I21869, I13349, Y17188, A35537, A35536, A97211, A02136, A04664, A02135, A04663, D28584, A51384, I01992, E03165, I08051, A70040, AF156296, AR066482, A92636, E02221, E01614, E13364, I00079, AF156294, Y11926, AF156303, AJ244005, A15078, AR035975, AR035974, AR035977, AR035976, AR035978, I00074, AR038286, I66495, I66498, I66497, I66496, I66494, I66486, I66487, I68636, I03665, I03664, E00523, I92483, I25041, D88984, D14548, A10361, I00077, I19525, AF156299, A91965, AF019720, S70644, I07429, E06034, A18722, D26022, X13220, AF156304, A91754,

2015	HTPGK74	890666	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 3288 of SEQ ID NO:2015, b is an integer of 15 to 3302, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2015, and where b is greater than or equal to a + 14.</p>	<p>AR027069, A20701, A04710, A52326, AF096810, M32676, A97221, X58217, A62298, AF156302, A60957, I84554, A62300, I84553, S65373, A60968, S78798, AF096793, A60985, A60990, A60987, I69350, A84916, Z82022, D44443, AB007195, X15418, A80951, A10363, AR018138, AF156300, X73003, AF130655, I08250, AR028564, AR060673, AR060676, A49428, E04616, S68736, X67155, A08457, A08458, AJ132110, S69292, AL133640, A13038, A29289, I48979, A78862, D89785, I48978, I07888</p> <p>AI149400, AA846733, AI085373, AI246729, AI608911, AI923892, AI798918, AW303427, AI708285, AW080676, AI684195, AI587306, AW189579, AI354582, AW044409, AI922230, AI628502, AI888388, AI758885, AI619483, W52043, AW057673, AL037160, AI921372, AW304335, AI624382, AI819541, AW276527, AI554494, AI809216, AI923339, AI381549, AI015540, AI473800, AW104317, AI910909, AI471516, AI624577, AI141307, AA075786, AI807993, AI566219, AI589224, AL048943, AI620365, AW391429, W37101, AI346763, AW086487, AI457487, AA664049, AW440483, AI476665, W63597, AI254213, AA934370, AA678559, AI139553, AI346198, AI469784, AI244140, AI911889, AI625096, AW439282, AI038691, AA884808, AI798465, AA905923, AA075733, AW372900, AW385528, AW385522, AL119459, AI352172, AA587707, AA947323, AA732669, AA617672, AI282902, AA946660, AI342280, AW372893, AI589501, AI185284, N90643, AW363861, AI051922, AI963833, AA583025, AW372901, AI221733, AI922401, AA912170, N53176, AW363862, AA723556, AI824545, AI952654, AI087392, AI565591, AA931720, AI026053, AA838395, AI361077, W28135, AI025960,</p>
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	U87916, U87914, U87919, AR066588, A18587, AF025482, AF025483, A18589, D78369, AR064389, S65879, Y07713, M73722, M73723, AL050149, AF090900, A18614, I89947, AL133560, AF113694, Y09972, Y11254, X70685, I48978, A08916, A08913, AL133640, AF090896, AL122110, A65341, AJ238278, AL117457, AF078844, AF177401, AL137550, AL110196, A03736, S61953, AL133557, AF146568, X82434, AF113699, AL133606, AL133080, AL050277, AL122093, I89931, AL137459, AL117460, I00734, AR011880, AF113690, AL122050, M73721, I48979, AL050116, E00617, E00717, E00778, AL133565, Y16645, AL133568, AL080124, AF100931, S78214, AF104032, AF090903, AF090934, AL049452, AF097996, AF125948, AF090943, U58996, AF008439, AL110280, A08910, E03348, AL137283, I49625, A08909, S68736, AL137521, AL137479, AF017437, E04233, AL096744, AL117583, AF113013, AL117435, AL050108, AL133113, U42766, AL080060, A77033, A77035, AL049430, I33392, E02349, M30514, U35846, AL049464, AL133038, AF057300, AF057299, X72889, AF158248, AL049334, AR020905, AF087943, AF017152, AF183393, L31396, AF026816, L31397, I26207, AR038854, A90832, AL133093, AL137271, AL122098, U80742, AF090901, AL050393, U91329, AB019565, AL122049, AF118094, AL137533, AF153205, AF113691, AL050146, AL080137, A08912, AL050092, AF111112, AL122123, AL137557, X84990, AF185576, X93495, U72620, AF113677, AL080074, AR059958, AL10221, AF113676, AL110225, AL050138, X65873, AF106862, AF091084, E07108, U68387, A12297, AL137463, AL122121, AF113019, AL133067, AL137526, AL049300, E05822, AJ000937, A07647, U00763, X63574, AF079765, AF061573, A58524, A58523, AL049938, AJ242859, AL137538, AL133075, AL117394, AL049466, AF113689,



				AF067728, Y11587, AL133081, A93350, AF026124, Y14314, E02221, AF118064, X87582, AF079763, AL137527, AJ006417, AF081197, I03321, AL080159, A45787, AF061943, AR013797, AL049283, AL050024, AF118070, Z72491, Z82022, AL117585, AF125949, AF162270, T55602, T55684, T83368, T83513, T85655, R05955, R06061, R13220, R15276, R21850, R22036, R22364, R27810, R33367, R33366, R34281, R40303, R45180, R45180, R64594, R66060, R69585, R70795, R79334, R80960, H04294, H04562, H08121, H08122, H13150, H13266, H26621, H26673, H47087, R83039, R86755, H55819, H55827, H71875, H73487, H96583, H96704, N49329, N71908, N93708, W24984, W31430, W31986, N91238, AA021171, AA035032, AA035520, AA079896, AA079897, AA165060, AA164800, AA463544, AA225869, AA632555, AA689363, N84693, C01059, AA091046, AA091332, AA095049, AI023106, AI078656, F09037, F11374
2016	HHGAB64	890698	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 365 of SEQ ID NO:2016, b is an integer of 15 to 379, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2016, and where b is greater than or equal to a + 14.	AA127776, AA206261, AA206263, AA281030, T67843, AA477584, AA325658, AA381036, R12107, AF022382, AL031295, L41668
2017	HOSOR86	890753	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2042 of	AI341460, AW173384, AW055235, W39204, AI909118, AI909124, AW118938, AI689438, AI419443, AI801242, AW438695, AI123971, AA707755, N59864, AA974210, AW130020, AA489046, AW298736, AA768780, AI146982, AI093766, AA284319, AA907244, AA279581, AA983814, AI955386, N59886,

			SEQ ID NO:2017, b is an integer of 15 to 2056, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2017, and where b is greater than or equal to a + 14.	AI535676, AI859864, AI498376, W01363, AI699807, AA824487, T86598, AA994605, AW044013, AA489144, T85108, AW271482, AA811658, AI631722, AW021293, R64514, T77559, AA736753, T77523, T86597, H44608, AI955411, N90263, H94626, AL119283, AL119309, AI909117, N77027, N79005, AW105078, N62828, AI334730, AI701272, T07505, AW376940, AW243861, AI909110, T84177, AC004227, AC004804, AL022153, AC006840, AC006197, AC008125, AC004822
2018	HE9RV77	890763	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1877 of SEQ ID NO:2018, b is an integer of 15 to 1891, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2018, and where b is greater than or equal to a + 14.	AW241738, AI554315, AW293947, AI763258, AI721194, AW043707, W67989, AW269975, AW025268, AI683778, AW183594, AW242994, AW015541, AA428411, AI312039, AA905967, AW274692, AI743918, AI632220, AA515764, AI018660, AA936423, N40612, AI913282, N36286, N42415, AA155820, AA155924, AA071299, W68001, AI799025, AI123370, AI184911, AA218950, AA173353, AL047892, AA526078, AI041007, N27838, N33441, AW168113, H64050, AI261230, AI347397, AA536165, AI569491, AW172624, AA781882, AI583725, AA149663, AA683414, AI539802, AI583700, AI445057, AI816810, AA176623, AI340128, AA375927, AA628568, AA434428, AA164797, R80702, AA445933, AI690654, H10573, AA179678, H15588, AI313391, AI538861, AI687194, AA167315, N25332, AW150559, W58766, H17389, AA164796, H82362, R41866, AI204281, AW301352, AW302888, F06348, AW271077, AA218953, AI223027, R41721, AI609973, AI336653, AA151878, H82258, N27072, AI805669, H99831, AI282274, T82232, AI086204, R80703, F07751, AA173300, T86068, H18079, AW169375, R11810, Z39244, T71190, R17172, R17252, N24523, AW302442, H99172, AI042623, N31444, H64001, H15531, AI872871, AI969736, AW026046, AA890413, R40959, R14564, AA102051, T81858, AA220917, D31565, U46380, AI277142, AA628822, F06639,

2019	HPRAJ70	890776	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 3543 of SEQ ID NO:2019, b is an integer of 15 to 3557, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2019, and where b is greater than or equal to a + 14.</p>	<p>AW004021, AI500444, H61486, AI962340, AI675481, AA860192, H87106, AI254025, F04003, AA166985, AA321073, AI557191, AI373103, AW072197, AI922171, AA091757, AI095771, AW264568, H10368, AW168889, AW276664, AA846587, AA506171, AA090327, AI218075, AA383806, AA220919, AA102050, H10369, AF133426, AF053453, AF043906, U84895, AL035608, AF053454, DI6949, AI336283, AI633192</p>
2020	HBODK52	890801	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1585 of SEQ ID NO:2020, b is an integer of 15 to 1599, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2020, and where b is greater than or equal to a + 14.</p>	<p>AI554661, AW274259, AA314190, AL120376, AI334374, AI274093, AI080270, AA883816, AA879435, AI475629, AI222322, AI432982, AA541454, AW265163, AA749031, AA307355, AA993688, AA298322, F24838, AI147394, AI864022, AA298719, AW002647, AI276250, AI142407, AA296879, F34528, AA249523, AA689493, AI808739, Z44194, AW139211, AL008582, AB035207, D64109, AL022393</p>
2021	HARNK52	890820	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a</p>	<p>AW372332, AW372296, AW372303, AW392509, AW392497, AW392507, AW372464, AW392505, AW004891, AA101225, AW392512, AA102670,</p>

			nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2579 of SEQ ID NO:2021, b is an integer of 15 to 2593, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2021, and where b is greater than or equal to a + 14.	AA120821, U54597, AW182872, AI446810, AA298878, AA294978, AW392492, AA298897, U54599, AI903382, AA991253, U95367, I59650, U95368, AF009702, AF009697, AF009701, AF009700, AF009699, AF009695, AF009693, AF009694, AF009698, AF009696
2022	HTLHU22	890863	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1674 of SEQ ID NO:2022, b is an integer of 15 to 1688, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2022, and where b is greater than or equal to a + 14.	AW248608, AI654134, AW249047, AW027462, AI688329, AW136847, AA995019, AI867957, Z83847, Z82206
2023	HWMBB2 9	890945	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2529 of SEQ ID NO:2023, b is an integer of 15 to 2543, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2023, and where b is greater than or equal to a + 14.	AL042015, AI760156, AI041208, AI675831, AA772287, AI761091, AA127766, AI189553, AI024414, AI680106, AA678819, AI338208, AI276652, AA069849, AI457552, AI005201, AA678586, AA918062, AA411763, AA037163, AA069802, H30857, AA703349, AA216712, AI266630, N23150, AI082636, AA827374, AA385301, AA411843, AI049637, N56802, AI125538, AA347097, T28624, N32729, AA146702, AA343535, AA375419, AW316863, N32133, AA385302, AA146719, AA669887, AA375420, AI867611, AW206128, AI630096, N95166, AA331777, Z24775, AA331778, F04253, AA318183, D51300, F04964, AA343617, AA194918, R41937, AA347119, AI524404, AA362621, AA402478, F00058, AW366370, C21140, R10662, AL079560, AA994433, AA218592,

2024	HWLND63	891125	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 490 of SEQ ID NO:2024, b is an integer of 15 to 504, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2024, and where b is greater than or equal to a + 14.</p>	AA888498, AA371095, AI783880, AA293830, AA037059, U07343, U07418, U80054, U17850, U40971, U40978, U17857, U40975, U17854, U17849, U40970, U17851, U40972, U17839, U40960, U17856, U17847, U40977, U17852, U40968, U17841, U40973, U17844, U40976, U40962, U17855, U40965, U17846, U17840, U17848, U40969, U40961, U40967, U59883, U17842, U40963, U40964, U17843, U17853, U40974, S77856, U17845, U40966  AA361119, AI391643, S75038, S75037, E02518, E02516, M37721, E03981, AF010472, E03204, E03202, E03203, E03201, D29625, AR036183, M18683, E03205, I09286, U79523, M82845, E03428, AR036184, X59689, M25719, M25732, X59687, X59688, E02517, X59685, X59686, T47438, T49517, T40337, T41197, T94036, R31007, R52165, R54705, R59553, R59554, R64336, R65793, R66811, R67946, H09249, H13692, H13744, H14286, H20221, H24797, H25936, H25967, H27194, H27195, H27531, H28158, H30301, H42178, H39094, H43206, H43253, H43704, H43788, H43842, H44053, H44129, H46393, H47935, R83920, R87925, R87926, R89640, H56488, H56489, H84491, H93855, H95554, H96000, H96001, N29623, W20057, W56622, W56652, W73707, AA001437, AA001129, N91455, N91545, AA010455, AA012908, AA017259, AA017548, AA019579, AA021397, AA021267, AA031311, AA031448, AA054148, AA055244, AA055263, AA057094, AA079530, AA079578, AA086369, AA086477, AA086052, AA088887, AA088908, AA101239, AA112044, AA112875, AA113195, AA113785, AA121382, AA134323, AA134324, AA134404, AA134405, AA159956, AA159957, AA169782, AA179024, AA179789, AA190506, AA190992, AA191267, AA191540, AA193244, AA194300, AA194320, AA194750, AA194569, AA195818, AA196755,
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AA197162, AA223624, AA235645, AA243301, AA250844, AA250903, AA250964, AA250940, AA459406, AA459418, AA459644, AA464185, AA464690, AA464779, AA427566, AA480355, AA483686, AA508610, AA513761, AA514432, AA515092, AA515572, AA533290, AA555236, AA557193, AA557435, AA558632, AA563928, F15660, F15723, F15909, F16089, F16376, F16546, F16798, F16863, F16967, F17260, F17364, F17412, F17509, F17552, F17561, F17566, F17588, AA583063, AA582179, AA583705, AA583809, AA583939, AA583973, AA587857, AA594803, AA604225, AA604384, AA610836, AA627361, AA635656, AA574051, AA577139, AA657777, AA657988, AA665180, AA737855, AA806213, AA827543, AA833831, AA856894, AA857063, AA855535, AA872104, AA873247, AA876266, AA917410, AA935997, AA961665, AA962483, AA968868, AA972526, AA974886, AA975454, AA976399, AA987883, AA948025, AI002503, AI074079, F18024, F18046, F18063, F18217, F18383, F18418, F18564, F18889, F18975, F19390, F19528, F19715, N84794, F17978, F17998, W28215, W73754, N89223, C02843, C02989, C03092, C03145, C03180, C03325, C03831, C03986, C04192, C04941, C05199, AA018964, AA063476, AA641390, AA642243, AA095945, AA096393, AA194324, AA206409, AA643334, AA654007, AA211715, AA213946, AA284988, AA284536, AA290829, AA291918, AA292000, AA293474, AA293062, AA293262, AA401909, F20245, F20441, F20482, F20840, F20860, F21515, AA411329, AA410818, AA456784, AA454513, AA459631, AA477102, AA477416, AA477746, AA477852, AA480115, AA481936, AA481469, AA496740, AA599776, AA628543, AA666379, AA456564, F21911, F21996, F22437, F22449,				
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				F22724, AA719223, AA724815, AA725731, AA758587, AA771884, AA775241, AA779626, AA781570, AA781985, AA812572, AA845555, AA852940, AA852551, AA852552, AA889439, AA773167, AA994600, AA993537, AI025737, AI038538, AI040946, AI124097, D25663, T16240, F00827, F00386, F01041, F01120, F01124, F01135, F00308, F01259, F01267, AA72935, AI302665, AI318091, AI347597, AI361314, AI361315, AI361322, AI401660, AI423575, AI423596, AI128394, AI224046, AI144391, AI149311, AI625219, AI625399, AI192566, AI214910, AI658645, AI538037, AI342442, AI633128
2025	HCROQ71	891264	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 766 of SEQ ID NO:2025, b is an integer of 15 to 780, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2025, and where b is greater than or equal to a + 14.	T08982, Z99396, AW392670, AW384394, AW372827, AL119363, AW363220, AL119443, AL119497, U46341, AL119319, AL119396, AL119457, AL119324, AL119483, AL119484, AL119341, AL119391, AL119355, AL119496, AL036418, AL038837, AL119335, U46350, AL119522, U46349, U46351, AL037051, AL036725, AA631969, AL042970, AL042965, U46347, AL134528, AL036858, AL119418, AL119444, U46346, AL134518, AL119399, AL042614, AL037205, AL039074, AL119439, AL036924, AL042544, AL038509, AL042975, AL119488, U46345, AL134538, AL042984, AL042551, AL134527, AL043029, AL042542, AL042450, AL037094, AL037526, AL037085, AL036196, AL037082, AL043019, AL037639, AL037077, AI142134, AL043003, AL036767, AL036190, AL036268, AL038520, AL038851, AL119464, AL038447, AL036774, AL036998, AL036733, AL037178, AL036238, AL037615, AL037027, AL036719, AL036765, AL036191, AL036679, AL036158, AC007073, A81671, AR060234, AR066494, AR023813, AR064707, AR069079, AR054110, AB026436 AI206965, AI955864, AI978772, AI952843,
2026	HBINP81	891305	Preferably excluded from the	

			<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2507 of SEQ ID NO:2026, b is an integer of 15 to 2521, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2026, and where b is greater than or equal to a + 14.</p>	AA910462, AA532931, AA551929, AI718392, AA573386, AW192987, AI749756, AA633326, AI341292, AA327208, AI572827, AI345905, N54395, AI631315, AI536146
2027	HDLAG89	891896	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2343 of SEQ ID NO:2027, b is an integer of 15 to 2357, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2027, and where b is greater than or equal to a + 14.</p>	AW242220, AI742204, AA779774, AA765518, AI670838, AI494382, AI016035, AI499655, H98843, W01534, AA262799, AA992714, R99930, H60755, AA262783, AA836865, N23566, AA463579, AI880528, AA247461, AA206947, AA463519, H60756, H62890, AA365288, AW361065, AA465401, H62924, AI370666, AI926079, T09101, AA774976, R41293, N86838, AA465512, N71001, AA436909, AI004991, AI134524, AI380036, AI432644, AI119457, AI119324, AI119511, AI042544, AI432653, AI119399, AI431307, AI432666, AI623302, AI431316, AI045327, AI431323, R99751, AI042898, AI047163, AI043152, AW081103, AI042382, AI079794, AI043168, AI431238, AI042787, AI047675, AI431351, AI042729, AA585453, AI042853, AI079741, AI038878, AI432654, AI142134, AI433157, AI432656, AW151136, AI539771, AI537677, AI500659, AI815232, AI801325, AI500523, AI582932, AI284517, AI923989, AI500706, AI445237, AI491776, AW151138, AI521560, AI889189, AI500662, AI284509, AI889168, AI866573, AI633493, AI434256, AI805769, AI888661, AI284513, AI888118, AI859991, AI440252, AI432650, AI042488, AI872423, AI554821, AI494201, AI866786,



	AI538885, AI431230, AI889147, AL041862, AL042515, AL045500, AL046356, AI433976, AI872300, AL042551, AW172723, AI440263, AL039390, AI371251, AI866510, AI436429, AI371228, AL040207, AI890907, AI860003, AI610557, AI866465, AI887499, AI431321, AI690946, AL045328, AI866469, AI521594, AI828574, AL048427, AL042538, AI537515, AL043089, AI275175, AL042745, AL043091, AI541056, AW151979, AI648567, AI620284, AI499463, AI582912, AI610362, AI538850, AI887775, AI623736, AI590043, AL045620, AI440239, AI492519, AI539800, AI923046, AI434242, AI500714, AI537273, AI355779, AI885949, AI581033, AI491710, AI436456, AI469775, AI963846, AI567940, AI817244, AI242736, AI612913, AW022682, AI539781, AI671642, AI285826, AI539707, AI863014, AI499512, AI889133, AW089557, AI559957, AL046681, AI521571, AI432677, AI610357, AL042377, AI434223, AI366900, AI610429, AI539632, AI889148, AI539847, AL042939, AI567935, AI805762, Z98465, AI561170, AI702065, AI354998, AL047422, AL045891, AI344785, AI866608, AI285439, AI866820, AI866581, AI815150, AI610402, AW172745, AI289791, AL043239, AI433968, AI567953, AI446495, AW403717, AL048656, AI866461, AL047092, AA420758, AI521465, AL043321, AL039276, AI371265, AI049851, AI274759, AI866457, AI285419, AI927233, AI567993, AI431315, AI654276, AI628850, AW118237, AW191003, AI828583, AI539863, AW162194, AI364788, AL045163, AL110306, AL048323, AI521596, AI929108, AI554827, AW197139, Y17793, A93016, AR066494, A58524, A58523, AL137429, U77594,

	AF090901, AL133049, AL050116, AF091512, E05822, Y11587, AL122049, A08916, AL137539, L10353, I48978, A08910, A08909, AF100931, AC004883, AF019249, AF182215, E07108, AC004227, I89947, A08913, AF113694, AJ000937, AL117583, U35846, AL122110, I89931, AF118090, AL080124, AF111112, I49625, X65873, AL050108, X89102, AB030279, D16301, AL137271, AL137521, AL122093, AR038854, AL137557, AL049314, U53505, AL133072, AL133565, AF118070, AL122050, I48979, AF090896, AF100781, Z72491, AL137538, Z37987, X83508, A65341, AF113676, AF158248, AF177401, S68736, AL133113, I00734, Y11254, AJ238278, Y09972, E00617, E00717, E00778, I26207, AF097996, AL133080, AL137459, AC006840, AF102578, E01573, E02319, E07361, A57389, AL049430, A90832, A93350, AF090903, AL117457, AL050155, AC000400, AL080060, Y16645, AC004987, AL080158, AL122098, AL133557, AL137529, Y07905, AL133560, AL137463, AF109906, AF119337, AF091084, AF017437, AF118094, AL049283, A08908, I33392, AL049452, AF106827, AL117585, AL110221, A08912, U80742, U87620, U75932, AB019565, U00763, I03321, AL133053, S78214, AF104032, AL049466, AF111851, U68233, I92592, AF017152, AL035458, AL133077, E15569, U78525, AL117435, AL122123, AL110159, AF003737, AF113019, AL137283, AF113677, AR038969, AL110196, AF087943, AF176651, AL050146, AL137658, AL133640, AL133606, AF113013, AF011880, AL049464, AF078844, AF113690, A18777, AL034417, A77033, A77035, AL049382, AF125949, AL096744, AR034821, A03736, AL122121, U72620, AF081195, AF111849, Y10655, X82434, AF090934, AF090943, AF118064, AL080159, X70685, U42766, U58996, Z82022, AC006313, AJ242859, AF183393, AL050149, AL110225,

2028	HE8FL95	892113	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1769 of SEQ ID NO:2028, b is an integer of 15 to 1783, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2028, and where b is greater than or equal to a + 14.</p>	<p>AL122118, AF106862, U88966, AF026816, A18788, AL050277, AF067790, AL133637, AL050024, E02349, AL110197, AL137648, AL117460, AF026124, AL137550, AF090900, AF125948, AF039138, AF039137, AL133014, AL117394, A12297, AL133031, AF079765, X63574, X96540, AL110280, X98834, AR020905, AL137556, I09360, AL133093, AF067728, AF113699, AL137560, I42402, L31396, AL133568, AL137488, AL050138, AL050393, L31397, U91329, AJ012755, AC006039, I89934, X52034, AF126247, X84990, AL080127, AL133075, AJ003118, AL080137, AL137527, AB029065, AF113691, AF061943, AL137476, S75997, X94372, AR013797</p> <p>AA195218, AA397579, AA399552, AA621184, AF692940, AA205886, AI702167, AI365354, AF090947</p>
2029	HHFGI59	892177	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 4317 of SEQ ID NO:2029, b is an integer of 15 to 4331, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2029, and where b is greater</p>	<p>AW207619, AA534290, AW340566, AW139543, AA947281, AA776464, AI697902, AA037301, AA205320, AA443876, AI206904, AA400700, T75075, AI363369, W46782, H24404, AI032106, AI880884, N59387, AI138757, AA307337, AA554317, AI359282, N28440, AW007847, AA662978, AI129939, AA476728, AI017751, AI431939, AI675507, AA953932, AI625227, AI991609, H23505, H18538, N77075, AI928411, AI206609, AA005130, F13039, Z39279, AA282393, F02661, AI635585, AA024899, R80487, T77003, AI040191, AI363266, H14797, H68321,</p>

than or equal to a + 14.	AA024900, R83449, AI249693, Z42220, AI560382, AI564770, AI301618, Z43207, R80381, AA206751, F06352, W93287, R40397, T87366, AI767771, AI094857, F02642, AA970085, AI942231, F06371, AA309597, F12724, R02736, W93286, T89999, W32125, Z43926, T82305, T78880, H23497, Z45760, Z45415, F10631, AI365308, R02735, T82820, Z39986, N50637, T99449, W31631, AW438395, AA331899, AA307511, AW363028, AA296346, AI081008, F01749, W46783, AA005415, AA485147, AA400655, F07384, T98853, R13009, AW169922, H14798, AA218742, AI827798, N59001, AI261716, H18430, R13181, AI673745, F03625, N54124, AI023953, AW316878, D80045, F11062, AA581647, AI587242, AI382497, D59502, AA485032, C14389, C14429, D58283, D81030, D80195, D80043, D80227, C14331, D80188, D80038, D51423, D59619, D80210, D51799, D80391, D80240, D80253, T03269, D80166, D80193, D80196, D80269, D59927, D59859, D80219, D50979, D80212, D59275, D57483, D59610, D59889, D80022, Z21582, D80378, D80366, D80164, D80241, D59787, D50995, AI905856, D80024, C15076, D59467, C75259, C14014, D51060, AA305409, AW366296, D80134, AW178893, D51250, D81026, F13647, AI557751, D80268, AA305578, D80248, D51079, D51022, AW179328, AW177440, AW178775, AW375405, D58253, AW378532, D80949, D80522, D80168, C14407, C14227, AW352158, D81111, D59695, AI910186, D80251, D52291, AA514188, AW369651, AW178762, AW177501, AW17511, D51097, AA514186, D80133, AW360811, C14298, D80064, AA285331, AW375406, AW352117, C05695, AW176467, AW378540, AW377671, AW360834, AW360844, AW360817, AW378534, AW179332, AW377672, AW179023, AW178905, T11417, D80302, T48593, D80132, AW177505, AW352171, D80439, AW377676,
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				<p>AW178906, AW352170, AW177731, AW178907, AW179019, AW179024, AW179220, AC005534, AC007075, A62298, A62300, A84916, Y17188, AJ132110, U87250, A82595, AR018138, A78862, D26022, A67220, X67155, D89785, D34614, A25909, X82626, D88547, AR008278, AF058696, I19525, AR025207, AB028859, X68127, A94995, I82448, A44171, AR016808, AB012117, Y12724, A85396, AR066482, AR016514, A85477, A86792, X93549, A43190, AR060385, AB002449, A30438, AR008443, AF135125, I50126, I50132, I50128, I50133, Y17187, AR038669, AR008277, AR008281, AR066488, AR060138, A45456, A26615, AR052274, I18367, Y09669, A43192, AR066487, I14842, AR054175, D88507, AR066490, D50010, AB023656, U79457, AB033111, U46128, AR064240, A63261, AR016691, AR016690, AR008408, AR062872, A70867, D13509, I79511, A64136, A68321, AR060133, U87247, AF123263, Z32749, AR032065, X93535, AR008382</p>
2030	HOEFT75	892291	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1220 of SEQ ID NO:2030, b is an integer of 15 to 1234, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2030, and where b is greater than or equal to a + 14.</p>	<p>AL036113, AA433879, AL045190, AA057554, AW239170, AW403966, AW239410, AW402407, AW375966, AW373031, N20475, AW067770, AW179034, AA410697, AA074710, AI752785, AW068103, H10878, AI869324, AW067904, AI751896, R87863, AA603295, R56461, W86435, AW068684, R88501, N25503, AI909381, M78217, AA852669, R87623, R87854, F05545, AA933040, AW372168, H14144, H86162, AA018954, AA410887, AA057207, AA362685, R84663, AI868439, AA326537, AA018988, T87278, H01627, AI910320, AA295291, R85200, R88022, AA430421, R85220, AW388463, R85353, AA335125, AW062970, R85031, AA293682, AA292982, AA368515, AW176608, AW062971, AA852517, H72226, AW393764, W02259, R99954, H27662, R24815, T99262, H52007, M1233, X05344, X52886, X53337, M63134, M63138, M63136, M63135, S52557, S74689, L12980, X68382, M63137</p>

2031	HWLEQ37	892367	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1075 of SEQ ID NO:2031, b is an integer of 15 to 1089, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2031, and where b is greater than or equal to a + 14.</p>	<p>AI884627, AW130437, AI668781, AL043335, AI907430, AI613418, AW150279, AI205012, AI038777, AA709407, AI690430, T35506, AI022430, AI023459, AI476713, AI671575, D29621, T34271, AW419081, AI261913, N32030, AA377446, AI912514, AA034072, AI053445, AI828656, AA533408, AI038724, AL042113, AI370475, AA569743, AI623899, AL135698, AI283090, AW272763, AI868164, AA633266, F17700, H57826, AI633185, AL045709, AA713674, AA360944, AA716755, AW088125, AA297968, AA659324, AI252506, AB020865, AC005940, AP000694, Z99755, AP000557, AL035587, AC004701, AC006965, AC005768, AC006211, Z98950, AC005152, Z85996, AF051976, AL109963, AC007934, AC005339, AF053356, AC006116, AL031281, AC005755, Z69917, AC005599, AC003101, AL050308, AL096791, AC005288, AL132992, AC004472, AL022326, AC004386, AL021368, AP000073, AP000512, AC004148, AL009181, AF196971, X55448, AC002527, AC005821, Z99714, AC006387, AC002375, AC006547, AC005041, AC006285, AC002347, AC002045, AC002418, AC003010, AC005520, AP000248, AC005192, AC005225, AP000346, AF001549, AC006480, Z93017, AC005899, AL096801, AL096817, AC003982, AL121652, AC005189, AC005968, AC005212, AL035683, AL049829, AF196779, AL022320, L44140, AC005971, AL022721, AC005701, Z85987, AL133448, AL109865, AL031055, AC004236, AC000097, AC006026, AC004682, AC004894, AC005015, Z99716, AC001228, AL133245, AL035400, AB023049, AL031286, AP000279, AC004797, AC007226, AL139054, AP000260, AL034429, AF111168, AB023050, Z95116, AC007284, AC006046, AL034402, AL117344, U91325, AL121655, AC008101, AC004638, Z86090, AC004526, AC002073, AP000038, AP000106,</p>
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2032	HWLDZ74	892558	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 969 of SEQ ID NO:2032, b is an integer of 15 to 983, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2032, and where b is greater than or equal to a + 14.</p>	<p>AC005740, Z95331, AP000194, AC002996, AL049869, AC005531, AC006556, AP000114, AP000046, AP000099, AC016025, AC004890, AC004024, AC005081, AP000043, AC003950, AC007688, AL035415, AC005914, AC001050, AC007458, U95742, AC004832, AC005154, AF205588, AC005221, AC002477, AC016830, Z94044, AC006146, AC004019, AC006077, AL117330, AL035089, AC009516, AP000036, AC006023, AC002400, AB000882, AC004020, AC004821, AC004814, AL132777, AL031311, AL117337, AC006064, L78810, AP000556, AC004699, Z84466, AC005332, AL109627, AL121653, Z93244, AC005969, AL022312, AC006958, AC005484, AL035455, AP000050, AL049635, AC003051, AC005488, AC006040, AC005562, AL133163, AC003029, AC004815, AC007637, AC005037, AC006160, AF196969, AC005585</p>
2033	HPJEB77	892563	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 708 of SEQ ID NO:2033, b is an integer of</p>	<p>AA337226, AI963222, AA336474, AI709289, AL079710, AI333306, AI095635, AI148461, AA593438, AA460382, N99226, F35658, F28539, AI674747, AI263147, AI689623, AI703331, AI304941, H46234, AA634465, AA336555, AA337527, AC004150, AC006024, AC006116, AC006539, U82672, AC005592, AC007204, Z98747, AC006271, AC004045, AC007993, AF146191, Z54951, AC007284</p> <p>H09290, AA806214, AA427513, AI904853, AA126879, AI910856, AW015950, AA134019, AA292157, AC009514</p>

2034	HNTST71	892820	<p>15 to 722, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2033, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 541 of SEQ ID NO:2034, b is an integer of 15 to 555, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2034, and where b is greater than or equal to a + 14.</p>	W93943	
2035	HCQDQ92	893223	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1070 of SEQ ID NO:2035, b is an integer of 15 to 1084, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2035, and where b is greater than or equal to a + 14.</p>	AA641005, AI762083, AI587618, AA143709, AW299688, AA524042, AI686577, AA143723, AA534417, AW000937, AI924527, AI924182, AA143746, AI478257, AW338896, AA999953, AI625051, AI417467, AA125991, AA233660, AA233546, AA612904, AA826318, AI597567, AA906335, AA143761, AA126071, AI873680, AI380837, AA056595, AA862082, AI910769, AI380247, AA411502, AA328454, AI927431, AA481473, AI368169, AA434336, AI002848, AA056638, AW177469, AW177487, AI829000, AA468833, U54603, AI916081, AW352026, AW365560, C00614, AW178439, AW292063, AW177675, AF216312, E13203	
2036	HWLCU24	893457	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a</p>	AA479821, AA432116, AI571125, AW016789, AI888160, AI991410, AI277106, AI431499, AA938157, AI422352, C06416, AI051837, AA425359, W63640, AA479700, T66755, AW235659, AI978666, AI765490, AL121547, H61675, T93682, AA427558,	



<p>is any integer between 1 to 331 of SEQ ID NO:2036, b is an integer of 15 to 345, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2036, and where b is greater than or equal to a + 14.</p>	<p>D52448, H49249, N54156, AA836066, AL043731, AA682248, AI887332, AI476215, AI207979, AI954997, AI954988, AI589450, AA609914, AI912009, AI218832, AI951761, AA609757, R77260, R60869, AI460050, AW058594, AW300537, AA782792, AA458911, N26791, AA708893, AI168124, W74653, AI148331, AA188960, AI114875, AI915018, AI598035, T05685, AW168412, AA454639, AA086016, AI745505, AA676964, H01261, AA129320, AA456251, AI653352, AA890006, AI096408, AW170047, AI247405, AI263393, AI081330, AI379150, AW015475, AA342341, H95038, AI814630, R08763, AI382384, AI273553, AI748817, N47474, AC005062, AF071240, AC005204, D37888, AF001893, AC005839, U46840, AC005082, AJ249224, X87116, D37887, Z97054, Y09257, X96585, AL033530, AC008109, AF175325, E15279, Z84484, AC005992, AC007298, M33644, AC007917, AC004467, AL078630, AC006115, AC005670, AC007461, AC000117, AL022401, X57080, AC007216, AC018769, AC009946, AL049543, AC005483, X79482, AJ388050, AC005884, Z93942, U09051, AC006112, AC002543, AF154112, AC004903, AF112374, AC006989, AF227510, AL109753, AC006075, Z83818, AB020867, AP000547, M28552, AC006455, AL022069, AC002467, AC005061, AC007437, AC004659, AC007239, AF131217, X52507, AC006151, X59370, Z83745, AC006196, AL078581, AC004001, X52617, A79336, U08407, AC005938, Z97180, AC004620, AC004533, AC006992, AP000459, AC002454, AC004849, AC006374, AL024506, AF178030, AL117338, AL109847, AC007320, M27933, AB017353, Z98043, AC005502, AL031177, Z96253, AF146793, AL049588, AF130342, AC012152, AC006324, U94853, AL035530, AF185591, AC004035, AL049635, I66426, AC003993, AL008723, AF001905, U85195, AF165142, AC004492, AP000696, AC009300,</p>
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2037	HSDJY15	893827	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1200 of SEQ ID NO:2037, b is an integer of 15 to 1214, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2037, and where b is greater than or equal to a + 14.</p>	<p>AE000658, AC004959, AC016831, AC007237, A13477, AC007510, AC005742, AC000353, AC006064, AL109623, AC000159, AF109076, AF053356, AC002041, AP000066, AC005835, AP001171, AC007970, AC011456, AJ010688, U08869, AC005345, AC006972, AL023279, AC006478, AC005262, AP000884, AL079305, AF061032, AL023280, AL133241, AC005105, AC007058, AC005355, AC004108, AR031020, AC004391, AC007021, AC005513, AC005225, AF002166, AF015149, AC005723, AC006031, AF064863, AC007226, AR036572, U91328</p> <p>AI133205, AL037682, AI114520, AI064817, AL036965, AL037211, AI207400, AI174949, AI174789, AA661919, AI174746, AL037212, AI133183, AW131769, AA826080, AI133103, AI064872, AL047790, AL037712, AI133447, AI557213, AA196323, AI557510, AI708887, AI064799, AI557501, AA639310, AA618404, AA130931, AA528236, AA176793, AA468368, AA643792, AI720756, C18264, AA149472, AL036525, AA176099, AA723030, AA533271, AA730806, AA814574, AA524681, AA155674, AI133076, AA211175, AI735145, AA176952, AA130534, AA526147, AA115162, AA293175, AI734894, AA188082, AA888633, AI954154, AL046874, AI253288, AA456356, AA487686, AA641711, AA468936, C17903, AA657662, AA613948, AI557378, AA069837, AI832615, AA149557, AA188546, AA535388, AI707485, AI031781, AA876497, AW270369, AI708877, AA493596, AA211174, AA143743, AI557052, AI986169, AI978768, AI253289, AI872466, AA180918, AA937682, AA070665, AA533010, AI453086, AA583899, AA885561, AI205258, AI133019, AA610163, AI613175, AI535649, AA469011, AA151710,</p>
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AA578931, AA502034, AA653010, AI453374, AA088752, AI564738, AA513214, AI812066, AI718381, AI057631, AA552282, AI862343, AA879175, AA579454, AI133109, AI625924, AI569517, AI880251, AA522574, AA130876, AA100886, AI267882, AA074099, AI242732, AI523331, AA947056, AI799288, AI041459, AI499399, AA086434, AL047605, AA101240, AI926578, AW151535, AI921645, AI735153, AI889237, AA197115, AI719836, AI610718, AI832704, AA669697, AA857010, AA468008, AI801089, AA935460, AI749770, AI635150, AI670796, AA856914, AI147985, AA652921, AI630885, AI707630, AA536131, AI269472, AI475977, AA659428, AA533389, AA602791, AI124539, AI273169, AI253340, AI801192, AI720378, AI749886, AI217009, AA603147, AI697158, AI720483, AA661870, AI091584, AI832890, AA394073, AI214988, AI253350, AA618229, AA081105, AW276922, AI366469, AA566063, AI557420, AI750108, AA575849, AA829092, AI459667, AI917999, AI216206, AL047639, AI720230, AI494209, AA469210, AA468066, AA744189, AW071131, AA586683, AA506661, AA658333, AA193059, AA486739, AA074102, AA603867, AA757697, AI199984, AA618302, CI7416, AA771977, AA526043, AI720323, AA502487, AI469695, AI080487, AI720329, AI721040, AI832984, AA533449, AI832445, AI832524, AI460107, AI366465, AI459785, AA226422, AA563955, AI748972, AA095036, AA211188, AI720479, AA708210, AA485747, AA600898, AI832459, AA174120, AW166854, AA192955, AI688903, CI8862, AA775370, AI031761, AA650170, AW152114, AA548147, AA545759, AW073702, AI525138, AA187609, AI888829,				
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2038	HSAAR81	893842	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 442 of SEQ ID NO:2038, b is an integer of 15 to 456, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2038, and where b is greater than or equal to a + 14.</p>	<p>AI250266, AI366365, AI572029, AA578760, AA876982, AI580012, X62996, V00662, J01415, D38112, X93334, U09500, X93339, D38116, X93338, X93335, D38113, X93347, D38115, X97707, U38274, AJ010581, AJ010580, AJ010582, AJ010583, Y13303, U38263, Y13302, Y13305, Y13304, AF081052, AJ010559, AJ010558, AF081049, AF088927, AI635278, AI174861, AA373755, AI250672, AI075000, AW073879</p>
2039	HNDAD16	893866	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 580 of SEQ ID NO:2039, b is an integer of 15 to 594, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2039, and where b is greater than or equal to a + 14.</p>	<p>W95642, AW167728, AA716097, AI281282, AA552443, AI143630, AI332337, AA315762, AA953818, AI346752, AA974853, AA631397, AA632754, AA552321, AI762067, AI748945, AA337636, AA614535, W60395, AA507878, AI973218, AA580138, AA345906, AA633399, W32686, AI474125, AA554791, N74131, AA808607, AI983974, W60304, AA384262, AA319354, AW265199, AA327250, W20434, AI985964, AA336734, AI350070, AA384635, AA337338, AA327500, W81242, AA327340, AA327546, W81706, AA327502, AA327154, AI460270, AI459674, AA029583, AI187009, AI832569, AW364159, AI183698, AA468623, AA928702, AW176584, AI973212, AI749833, T29881, D25724, AA314975, AA029584, W95644, AA574221, I95749, L15203, L08044, U25654, U25656</p>
2040	HCNSE58	893867	Preferably excluded from the	<p>AI281282, AI143630, AA315762, AA552443,</p>

			present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 639 of SEQ ID NO:2040, b is an integer of 15 to 653, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2040, and where b is greater than or equal to a + 14.	AA974853, AW167728, AA716097, AI332337, AI346752, AA953818, AI748945, AA631397, AA808607, AA580138, AA507878, AA614535, AA552321, AI762067, W60395, W32686, AA632754, W60304, AI983974, AI973218, AA633399, AI985964, AA554791, AA314975, N74131, W20434, AI350070, AA337636, W81242, AI832569, W81706, AI183698, AA468623, AI459674, AI749833, AI460270, AA928702, AI187009, AW364159, W95642, T29881, AA345906, AI474125, AI973212, AW265199, D25724, AA384635, AA384262, AA327250, AA336734, AI561269, AA327500, AA327546, AA574221, AA327340, AA029584, AA327502, AI699171, AW176584, AA327154, AA532852, AW188590, AA558976, AI560870, AI749877, AA319354, AW007096, W95643, AA337338, AA384655, AA029583, W95644, AW392670, AW291863, Z99396, AL119319, AL037205, AL119401, AW372827, U46350, AW363220, AW384394, AL119439, AL119484, AL119391, AL119324, AL119522, AL119457, U46347, U46351, AL119483, AL119418, L15203, I95749, L08044, U25657, U25656, U25654, AR060234, AR066494, A81671, AB026436
2041	HSVCD79	894012	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1902 of SEQ ID NO:2041, b is an integer of 15 to 1916, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2041, and where b is greater than or equal to a + 14.	AA429308, AW138602, AW024259, AA558588, AI492469, AI367813, AA428240, AA719541, AA888930, AI190902, C14850, AI217028, D60222, AI286160, AA737138, R79200, H64703, R79465, AA737139, AI268290, AF023259
2042	HSIFA27	894051	Preferably excluded from the	AI972556, AI968208, AW274901, AI744720,

			<p>present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1581 of SEQ ID NO:2042, b is an integer of 15 to 1595, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2042, and where b is greater than or equal to a + 14.</p>	<p>AI885290, AA449113, AW152432, AI479938, AI800087, AW390446, AI800088, AI799502, AI859002, AI423145, AW088405, AI858842, AI990019, AI809596, AI401062, AI360174, AW197421, AI689608, AW197663, AW103934, AI218225, AI206902, AI376613, AI219568, N59385, AA053930, AA534904, AI656541, AI128371, AI360254, AI285163, N32810, AA428038, N39444, AA776360, AW088291, AI817703, AA421739, AI565066, AI674914, AW190558, AW194393, AW276699, AI361508, AI824832, AW451191, R91784, AW390451, AA427924, AA257059, AW071546, AI081359, AI189019, AI002857, W93989, AW206484, H55900, AA034237, AA127466, AW188281, AI290045, AA447735, AW027775, AA773930, AI633932, AA364666, AA327290, R82206, AW027950, AI638501, W93800, AI690373, AW027793, AI143661, R59973, AA503464, R82261, R91785, N63596, AW276891, AW276821, AW182096, H01166, H01251, N29781, H24046, H13082, R27203, AI811525, AA055340, AA319583, AA358644, AA904821, AI274485, R27202, AA127579, R46792, N57202, R67153, AI803875, H13286, D25758, AI653480, N77073, AA055339, H24153, C04100, AA502410, N48556, AI874167, H61875, AI783927, AA453668, C15384, AB018305</p>
2043	HTTKV46	894121	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1047 of SEQ ID NO:2043, b is an integer of 15 to 1061, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2043, and where b is greater</p>	<p>AI678077, AI884863, AI869333, AI884942, AI859296, AA829937, AW250313, AW300936, AI571293, AW273060, AW248281, AA582906, AA928110, AA283711, AI589898, AI038859, AA594105, AA828316, AA906324, AA938955, AW170665, AW172642, AW248955, AA975490, AI123879, AI367867, AI826097, AW272915, AW070748, AA316879, AI089508, AI086474, AA661759, AI566244, AI015067, AI538087, AW245061, AW000868, AW409921, AA688299, AW250988, AA827720, W58033, AI953468, AA211097,</p>

than or equal to a + 14.	<p> AW078745, AI891144, AA994072, W79220, AI471577,  W74508, AI922589, AW102638, AA918328, AA826730,  AA969243, D56355, AA991461, H51344, H73020,  AW089131, AA355115, AW340401, AA210923,  AW168828, AA290724, T19021, W57949, AI362888,  T29587, AA876186, AW268964, AI307442, AW304648,  AW075100, AA380031, M91218, AW073433, AI802854,  AI345036, AW071289, AI349002, AW075177,  AI307208, AW072721, AI334909, AI312145,  AW073656, AW071374, AI340734, AW075033,  AI307478, AI348921, AI252839, AI307493,  AI255068, AW073456, AW072496, AW302738,  AW075181, AI583899, AW301481, AW271034,  AI334911, AW074937, AI345565, AI334881,  AW075006, AW072513, AI252926, AI252463,  AI251289, AW074809, AI255052, AI307559,  AW071420, AI270156, AI610913, AI251264,  AI802837, AI583896, AA824526, AW072520,  AI252160, AI251662, AI309390, AI334886,  AI340619, AI252075, AI254764, AI251262,  AW075183, AW302733, AW073049, AI251232,  AI270787, AI247038, AW072901, AI054335,  AI313336, AI246087, AW271039, AW271867,  AI349195, AI269525, AI340589, AI250128,  AI334733, AI054060, AI289711, AA464019,  AI053722, AI340643, AI054057, AW071311,  AI054302, AW074866, AW302327, AI054217,  AW302085, AI054172, AI053900, AA293354,  AW301901, AI054079, AI271496, AI254494,  AI252427, AA993616, AI307473, AA496372,  AA464729, AI566787, AI885746, AA496649, T90849,  AW071307, AI565286, H77912, AI865061, AA426470,  AI354978, AA912601, AW249375, AI345688,  AI307618, AI345677, AI312210, AI340533,  AI345130, AI254134, AI340511, AI349742,  AI334895, AI307507, AI310927, AI336488, </p>

2044	HHGCE29	894341	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 639 of SEQ ID NO:2044, b is an integer of 15 to 653, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2044, and where b is greater than or equal to a + 14.</p>	<p>AI312271, AA995486, AW086285, AI254533, AI336565, AI334738, AI312261, AI609420, AI307549, AI307734, AI348847, AI345156, AI862220, AI307569, AI336654, AI310582, AI312959, AI311149, AI336503, AI310606, AI313346, AI336643, AI344808, AI309391, AI345143, AI309431, AI345527, AI312165, AI345739, AI312143, AI378721, AI344260, AI348981, AI348995, AI310940, AI344843, AI310571, AI307526, AC005324, M91670, AJ388535, AF093119, X70685, X72624, Y09972, AF069506, AF159148, AF144082, AL050280, AL133557, AF038440, AF113694, X92070, Z70226, AC000030, I52013, S73498, AC002480, AI252868, AI305762, AA490691, AA525138, AA513505, AA442532, AA256875, AW194680, AA479366, AC009336, X71422, X60395, X60762, M81249, D10288</p>
2045	HCYBE73	894397	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 342 of SEQ ID NO:2045, b is an integer of 15 to 356, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	AA305176



2046	HWLVS05	894631	<p>NO:2045, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1425 of SEQ ID NO:2046, b is an integer of 15 to 1439, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2046, and where b is greater than or equal to a + 14.</p>	<p>AI952147, AA827782, AI523970, AW008938, AA236865, AI673370, AW043829, AI143323, N36986, AA306716, AI361743, AA460666, AW080829, AI914077, AI214786, AA862831, AI963652, AI913070, AI805253, AI423188, AI003936, AA994686, AA130868, AA533231, AI358965, AI873692, AA569719, AA865951, AA644481, AI272308, AI445569, AA130923, AI418685, AI669710, C00906, R85067, AA847433, AA502585, AA968581, AI088486, N46300, AA176755, AL048511, AA179075, AW163823, AW162071, AI274452, AL042488, AI799540, AI961393, AA904283, AI290128, F35031, AI582822, AA088789, AA829775, AI270039, AI679800, AW262565, AL042515, AI918424, AI884459, AA807326, AL122098, S68736, A57389, AL137562, AF158248, U72071, X79812, AL049959, AF070632, U92068, AJ131955, AF169154, AF030165, Z30970, AL096709, Z49258, AC006561, AL022396, Z98049, AC007370, AL049540, AL021391, U94316, AP000250, AP000133, AP000211, AP000030, AF162270, I80845, AF107018, U77594, AL080074, AR029580</p> <p>AL134920, AL042896, AL119443, AL042965, U46341, AI142139, AL119418, U51899, A81671</p>
2047	HCRMV27	894806	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 572 of SEQ ID NO:2047, b is an integer of 15 to 586, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2047, and where b is greater than or equal to a + 14.</p>	

2048	HCRO122	894811	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 881 of SEQ ID NO:2048, b is an integer of 15 to 895, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2048, and where b is greater than or equal to a + 14.</p>	<p>AA279019, AA279229, AW392083, AI770039, AL134531, AW372827, AL119439, AL119484, AL119363, AL119391, AL134528, AL119444, AL119496, AL134538, AL119418, U46346, AB026436, AB1671</p>
2049	HCQAF06	894818	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 129 of SEQ ID NO:2049, b is an integer of 15 to 143, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2049, and where b is greater than or equal to a + 14.</p>	
2050	HKCSA83	894820	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 562 of SEQ ID NO:2050, b is an integer of 15 to 576, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2050, and where b is greater than or equal to a + 14.</p>	<p>AW360811, AW177440, T03269, AW375405, AW178893, AW179332, AW366296, AW367950, AW360817, C14389, AW179328, T48593, AW178906, AW375406, D80439, AW378534, D58283, AW377672, D51799, AW179023, AW178905, D59859, D80022, C14331, D80166, AW177731, D80195, D80193, D59927, D59467, D51423, D59619, D80247, AW378528, D80210, D80391, D80164, D59275, AW178762, D80240, D80253, D80038, AW179019, D80043, D59787, D80227, D59502, AA305409, AW378532, AA305578, AW377676, AW352170, AW178907, AW178908, D80251, AW178914, C06015, AW378533, D45260, AI525923,</p>

2051	HSBA104	894824	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 566 of SEQ ID NO:2051, b is an integer of 15 to 580, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2051, and where b is greater than or equal to a + 14.</p>	<p>C03092, AA285331, AW378542, AI525917, AA809122, T11417, F13647, AI525920, AA514184, AI525227, AI525913, AI525925, I50126, I50132, I50128, I50133, Y09669, AR066488, AR016514, D89785, AR066487, AR060138, A84916, A45456, A67220, A62300, A62298, Y17188, AB028859, A82595, A78862, D34614, A94995, D26022, AR060385, A30438, AJ132110, AR018138, A26615, AR052274, A43192, AR008278, X67155, Y12724, A43190, AR038669, AF058696, A25909, AR008443, AB002449, D88547, Y17187, D50010, A63261, A70867, X82626, AR062872, AR025207, AR008408, AR016691, AR016690, U46128, A64136, A68321, D13509, I14842, AR054175, AR060133, X68127</p> <p>AI809563, AA375259, D50995, D80043, D80268, C14389, D58283, D80188, D80391, D59787, D51423, AW360811, D80247, D50979, D80196, D80439, D80522, C14014, D80212, D51022, D59859, D80022, C14331, D80166, D80195, D59467, D59619, D80210, D51799, D80164, D59275, D80240, D80253, D80038, D80227, D59502, AA305409, D59927, D81030, D80248, D81026, D80269, D80366, D80219, AA305578, C15076, D59610, D57483, D51060, D59889, D80193, D80133, D80045, D80024, AA514186, AA514188, D80302, D80157, D80378, D51103, AW177440, D51759, D45260, D80241, D80251, AW178893, T03269, C06015, AW377671, AW375405, H67854, AA809122, AW178906, AW366296, AW360817, AW179328, T48593, AW375406, AW378534, F13647, AW179332, AW377672, AW179023, AW178905, AW177731, AW378528, AW178762, AW179019, AW378532, AW352170, AI525923, T11417, C03092, H67866, AW179020, AW377676, AW352171, AI525917, AW178907, AW178908, AW179024, D51250, C14227, AW360834, AW177733, C14973, D58101, AI525920, D59317, AW367950, AW177456, T03116, AI525227,</p>
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2052	HCQCD80	894827	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 557 of SEQ ID NO:2052, b is an integer of 15 to 571, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	<p>AW178980, D58246, AW178986, D81111, AW178914, D59474, AW178774, D80258, AW179018, D80014, D59503, D80064, C14344, AW378533, AI525242, D51221, AI525912, AA514184, AI525235, AI535686, D51079, AW178911, AW378543, AW378525, AW378540, AW352163, D59551, D52291, AI525215, AW177728, C14046, D59627, AI525925, AI557774, C14407, D80168, AI557751, AI525222, D51213, AW178781, C16955, AI525237, Z33452, AA285331, AW378542, T03048, D45273, C05763, T02974, Z21582, AW360855, AI525928, AI905856, AI525228, H67858, C14298, T02868, AW369651, AI525216, Z30160, C13958, AI525238, T11191, D31458, AI525913, AC000047, AR008278, AB028859, AJ132110, A84916, A62300, A62298, A82595, AR060385, AR018138, AF058696, AB002449, I50126, I50132, I50128, I50133, Y17188, AR016514, X67155, AR060138, A45456, A94995, D26022, A26615, AR052274, A43192, Y12724, A43190, AR038669, A25909, AR066488, Y09669, AR066487, A67220, D89785, A78862, D34614, A30438, AR008443, AR054175, I14842, Y17187, AR008277, AR008281, D88547, A63261, D50010, AR016808, AR062872, A70867, X82626, AR008408, AR016691, AR016690, U46128, AR025207, X64588, A64136, A68321, I79511, D13509, X68127, AR060133, AF123263, X72378</p> <p>H67854, D80024, D51079, D80014, D80188, D81111, D80251, D80366, D57483, D80253, D59889, D51423, D59859, AA809122, D51053, D80248, D50979, C14389, C14014, D80268, D80439, D58246, D45273, D81030, D45260, F13647, D80157, AI557774, H67866, C15076, D80166, D80212, C16955, D59619, D80133, D80210, D51799, D59551, D80240, T11417, C03092, D80219, D58283, D80258, D80064, AA305409, D81026, D80269, D80022, C14331, D80195, AA305578, D59627, C14973, Z33452,</p>
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2053	HCQCF52	894830	<p>NO:2052, and where b is greater than or equal to a + 14.</p>	<p>D80196, D59467, D80247, C14227, D51022, T02974, D59503, D80168, D80391, D80164, D59275, D80045, D80038, C06015, D80043, D59787, D80227, D59502, D50995, D51103, Z21582, D59474, D59610, D51221, D59317, D80302, D80522, D59927, D59653, D51759, D51060, AI535686, C14046, C14344, C14407, C14298, D58101, C05763, AI525235, AA514186, D80193, D51213, AA514188, AA514184, T02868, D80241, D60010, Z30160, D80378, AI525912, C13958, AI525920, T03116, D80949, AI525242, T03048, AI525222, AI525917, AI525228, AI525215, AI525216, AI525227, AI525238, AI525237, C75259, AI525239, N66429, AI525923, C05695, AF176838</p>
2053	HCQCF52	894830	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 793 of SEQ ID NO:2053, b is an integer of 15 to 807, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2053, and where b is greater than or equal to a + 14.</p>	<p>AA227515, AA668992, AA521270, AA642411, AA912934, AI769898, U66679, AW104620, AI128014, AA887445, AA767655, AI827845, AA527308, AA521033, AA403157, AA769395, AI678722, AI806729, AI311483, AA705237, AA824500, AA971136, AI685026, AA403158, AA854414, AI276471, AI247618, AI675494, AI675399, AA733151, AA363682, AA507532, AI400404, AA974072, AI810257, AW273711, T78010, AW136893, F34862, AA626765, R08913, AA056272, AA743512, AA369621, AA577252, C14331, AA809122, AI557751, D51799, D59502, D80195, D80038, D80164, D58283, C14429, C14389, D81026, T10733, D59467, D59275, D80302, D80227, C15076, D80439, D80269, D80022, D80166, D80193, D59619, D80247, D80210, D80391, D80240, D59859, D80045, D50979, D59787, AA305409, D51423, D80253, D80043, D81030, AA305578, D80212, D80196, D80188, D80219, AA514188, D80268, D80366, D51022, D80248, D80522, D50995, C06015, D59927, C14014, D51060, D59610, D57483, D80378, D51103, D80133, D59889, AA514186, D80024, D80157, AW360811, AW177440, D51759, D80241, C05695, D80251, AW178893,</p>

	T03269, AW377671, AW375405, D59653, C75259, C14344, AW366296, AW178906, AW360844, AW360817, AW179328, T48593, AW375406, D59373, AW378534, AW179332, AW377672, AW179023, H67866, AW178905, AW177731, AW378528, AW178762, AW179019, D45260, AW378532, AI525923, H67854, T03116, C03092, D59503, AI535686, D80064, AW177501, AW177511, C14407, N66429, AW179020, D59317, AW377676, AW352171, D80258, AW352170, T11417, AW178907, AW178908, AW179024, D58246, AW352117, F13647, AW177456, D51250, AW360841, AW360834, AW352120, AW177733, AW177505, AW176467, AW178775, D81111, AW367950, AW178909, AW179004, D59551, AW179329, AI525917, AW178980, AW178986, AW178914, AW178774, C14227, AW178754, AW179018, AW352158, D80014, AI535665, C14973, AI525920, AW378533, D59695, D51221, D59474, D60010, AI535959, AI557774, D60214, AA514184, AW179009, AW179012, AW178911, AI525227, AW378543, AW378525, AW378540, AW177722, AW352163, D52291, D58101, C14046, AW177734, C14957, AI525235, AW177728, AI525925, D80949, D596277, AI525242, T02868, AW178781, AI525215, D51213, D45273, AI905856, AI910186, D59976, AI525912, AA285331, AW378542, AF038950, AB005289, AF078777, AF133659, AR028561, U43892, A82595, A30438, A62298, A84916, AR018138, A62300, AR060385, Y17187, AB028859, AJ132110, AB002449, AF058696, Y17188, AR008278, I50126, I50132, I50128, I50133, AR008277, X82626, AF008281, AR016514, AR016808, X67155, AR060138, A45456, I14842, A94995, D26022, A26615, AR052274, A43192, Y12724, A43190, AR038669, A25909, A67220, AR066488, Y09669, AR066487, X68127, D89785, A78862, D34614, AR008443, U46128, AR054175, AR016691, AR016690, D50010, D88547, A63261, A70867,

2054	HCQDE22	894831	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 829 of SEQ ID NO:2054, b is an integer of 15 to 843, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2054, and where b is greater than or equal to a + 14.	AR062872, AR008408, AR025207, I79511, A64136, A68321, D13509, AR060133, I82448, AF123263, AR032065 N58518, AA699859, AA677543, AC006556
2055	HWLVU33	894832	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 739 of SEQ ID NO:2055, b is an integer of 15 to 753, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2055, and where b is greater than or equal to a + 14.	AA775419, AI273235, AI754154, AI446402, AI640735, AI468600, AA602645, AI675266, AA460180, AI382693, R40043, AA813916, AL119457, AI110849, AL042544, AL042382, AL119399, AL079794, AA225339, AI468872, AW262565, AI499463, AI680498, AI362637, AI491852, AL043326, AL135661, AI224992, AI648684, AL045903, AI679990, AI590118, AW148716, AI446092, AI282326, AI554245, AI857296, AI701074, AI569616, AI446605, AW087445, AW071417, AI636445, AI567360, AI591316, N42321, AI269696, AI500039, AI758437, AI612920, AI570384, AI801766, AA640779, AA287231, AI811344, AI520785, AI886124, AI690312, AI590120, AI475451, AL040243, AI554427, AI273142, AI097248, AW103893, AW150578, AI869367, AI868831, AI633419, AI433976, AI280747, AW302988, AW274192, AI687065, AI612759, AI800453, AI800433, AI684265, AW023590, AI273048, AI539771, AI816947, AI610756, AI274013, AI500146, AI537677,

AI859511, AA427700, AW170635, AI539153, AW075084, AW118512, AW131954, AW196141, AW192375, AI554484, AL036361, AI568296, AI912866, AI885974, AI571551, AW168795, AI281779, AI252813, AI453322, AI498579, AW002342, AI824557, AI702433, AI343059, AI799199, AW082040, AW102785, AI561299, AI610645, AI349933, AW301409, AI888953, AW088903, AL038565, AW088793, AI866002, AI828731, AI866608, AI866111, AI919345, AW162071, AI251830, AI366549, AI636719, AW238730, AI802542, AL120736, AL036214, AW074993, AI349614, AI800411, AI538085, AI445165, AW268253, AA508692, AI312152, AI952360, AI264741, AI340582, AI784252, AW132034, AW193000, AI349937, AI702406, AI567993, AW301410, AI571909, AI349004, AI620287, AI917055, AI307708, AI318280, AI680388, AI308035, AL036146, AL036759, AI815855, AI679504, AI873704, AI923768, AI682743, AI678302, AL079963, AW403717, AW071349, AI439478, AW268220, AI560099, AW103371, AI273843, AI521012, AI270707, AA470491, AI281837, AW243820, AI801152, AI439745, AI632033, AI434223, AL079741, AW301505, AL045500, AI922901, AI249257, AI590999, AI569583, AI572787, AI564247, AI282281, AW075351, AI925156, AW169653, AW303061, AW148320, AI608936, AL119863, AW075413, AI500077, AW167410, AI282903, AW300889, AI862144, AI439717, AI567612, AI284131, AI570989, AI312428, AI619749, AI567351, AL134259, AI431424, AI250663, AL119828, AI343112, AI349645, AL036980, AA938383, AI133559, AI349598, AI572676, AL036802, AI269862, AW071177, AI476109,				
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				AI345735, AI648663, AL036396, AI950664, AI872074, AW168723, AI538716, AA613907, AW089572, AI334884, AI348897, AL036274, AI433157, AI500659, AW068845, AI612885, AI340627, AI634224, AI445237, AW151138, Y11587, AF158248, S68736, I48979, AL122093, AL122050, AF125949, AL133640, AL110196, AL133016, AL117457, AL137557, I48978, A08916, AF113013, I89947, AF078844, A08913, S78214, I89931, A93016, AL080137, AF118064, L31396, L31397, AF017152, AL080060, AF113694, AF113691, AL050393, AL133565, AF113690, AF113019, AF090934, A65341, AL137459, AL137527, U42766, AF090943, AF090900, AF113676, AF111851, I49625, AL133557, AL110221, AF125948, AL050146, AB019565, E03348, AF118070, X84990, AL050149, AL133606, AF104032, AL049314, AL133093, AL080124, AL049452, AF113677, Y11254, AL050116, AF091084, U91329, AL122121, AF017437, AL049938, AJ242859, AL117460, AL050108, AL110225, AL117394, X63574, AL122123, AR011880, AF113689, AF090903, AL096744, AF146568, AF090896, AF090901, AR059958, AF079765, AF106862, Y16645, AL117585, AL133075, X82434, AJ000937, AL133080, AF113699, AL049466, AL137550, AL050277, E07361, AJ238278, AL049464, AL050138, A08910, AL133560, AL137283, AL122098, AL049382, E02349, AF177401, AL049300, AF097996, AL117583, E07108, AL080127, U00763, AL117435, A58524, A58523, A08909, AL049430, Z82022, A77033, A77035, AF118094, AF183393, A08912, I33392, AL050024, X72889, AL137538, X70685, U67958, AL133113, AL137271, I42402, A12297, X96540, AF061943, AL137648, I03321, AL137463, X93495, U35846, AL137521, X65873, A03736, AL122110, U80742, U72620, AL137560, I09360, AL049283, AJ012755, AF119337,

2056	HAIJAY88	894842	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 4002 of SEQ ID NO:2056, b is an integer of 15 to 4016, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2056, and where b is greater than or equal to a + 14.</p>	<p>AF087943, AL122111, AF067728, AL080159, AL133072, X98834, AL050172, AL110197, E08263, E08264, U77594, A07647, AL122049, E15569, AR000496, U39656, S61953, AL133568, AF000145, Z72491, AL137476, AF026124, U96683, I17767, Y09972, I26207, AL133077, AF111112, AF057300, AF057299, M30514, AL137556, AF132676, AF061836, A93350, AL133014, AF026816, AF003737, AF095901, A08911, AL137523, I00734, I66342, U68387, Z37987, E00617, E00717, E00778, E02221, AL133104, AL080074, AR013797, AL137526, AF081197, AL133098, AF079763, AR038969, AF067790, A45787, E05822, AL110280, AF106827, Y14314, AC006371, AL133067, AF153205, AL137429, AF100931, E04233, AF118090, AF185576, X83508, AF162270, AF081195, L19437, AL117440, AR038854, AL137533, A90832, Y07905, X62580, AJ006417, X53587, AF111849, L30117, AF061573, U49908, AL137705, AF008439, AC004200, X87582, U58996, AF000301, E08631, AL137300, AL122118, U88966, AR054984, AL080158, AL023657</p> <p>AI432644, AI623302, AI432655, AI431310, AI432654, AI431337, AI431328, AI432651, AI432677, AI432666, AW081103, AI432653, AI431312, AW128900, AI431347, AI431230, AI431354, AI431346, AI432662, AI431353, AI492519, AI431255, AI431243, AI432649, AI432647, AI432661, AI432675, AI431248, AI432650, AI431330, AI432665, AI431357, AI431351, AI431345, AI432672, AI431254, AI432676, AI431241, AI432673, AI432658, AI432674, AI431340, AI432664, AI431307, AI431316, AI791349, AW128897, AI432657, AI431247, AI431358, AI492520, AW129223, AI432643, AI431751, AI492509, AI492510, Y17793, AF064854, AF019249</p>
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2057	HCRPM46	894878	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 573 of SEQ ID NO:2057, b is an integer of 15 to 587, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2057, and where b is greater than or equal to a + 14.</p>	<p>AL119319, AW392670, AL119418, AL042551, AW372827, AW363220, AW384394, AL119497, Z99396, U46341, AL119483, AL119457, AL119443, AL119324, AL119484, AL119363, AL119341, AL119391, AL119355, AL134531, AL134518, U46351, U46349, AL042965, AL119399, AL119335, AL119522, AL119396, U46350, U46347, AL119496, AL119444, U46346, AL134528, AL042975, AL134538, AL042542, AL037205, AL134920, AL134533, AL119439, AL042614, U46345, AL043019, AL042984, AL043029, AL042896, AL043011, AL042970, AL042450, AL042544, AL043003, AL119488, AL119464, A81671, AR060234, AR066494, AB026436, AR054110, AR069079, AA307684, AA232750, AI417539, AA100160, AA232253, AA864846, AA244504, AA244505, R57782, AW364482, AW364479, AR044133, AR044123, AR044135</p>
2058	HOEQI9	895122	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1049 of SEQ ID NO:2058, b is an integer of 15 to 1063, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2058, and where b is greater than or equal to a + 14.</p>	
2059	HKGBP52	895303	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2702 of SEQ ID NO:2059, b is an integer of 15 to 2716, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2059, and where b is greater</p>	<p>AW058657, AA400627, AI692280, AI342528, AI743405, AA400382, AI675621, AI808100, AI688291, AI340200, AI701582, AI813453, AW135173, AI343951, AI299820, AA393033, T03738, N24268, H98701, AI040531, R56558, H54669, AI830628, H01460, C16675, AA707616, H00353, AI146912, H01555, R21829, AI755214, AI754567, AI754105, R56559, AA535216, AI249688, AI080307, AL135377, AW131356, AI038304, R21894, AW103406, AI569100, AI858691, AI583142, AW192599, AI077941, AA176978, AA704393, AA602906, H00307,</p>

than or equal to a + 14.	AA491767, AA719073, AA659832, AW270385, AI884383, AI354423, AI061313, AI590458, AI679002, AW270255, AI679759, AI926728, AI590499, AW069227, AI732502, AI791458, AI609972, AI754336, AI590580, AI499376, AW022934, AI753113, AW277253, AW438856, AA584765, AA484892, AI791659, N71685, AA444166, H85383, AA171892, AW089950, AI572680, AA715173, AI636734, AA720702, T57096, AI707788, AA622801, T71936, AI431513, AA583386, AA525753, AI753488, AI340151, AC002565, AC004841, AC007766, AC005244, U63630, AL080317, AC007283, AC000159, U47924, AL035455, AJ010770, AC004013, AC004887, AC005067, AC007216, AL035454, AC005971, AC006064, AF129756, AC006581, AC005102, AL133163, AC004983, AC005081, AC009721, AC005088, AC005280, AC010170, AC004685, Z82976, AC006511, AC004148, AF045555, AC002551, AD000833, AC005670, Z98750, AL078581, AC005004, AP000505, AC006241, AL109628, AL033527, AC005365, AL109759, AL023575, AL049759, AL049643, AC005231, AP000213, AL049780, AC006530, AC005071, AP000135, Y14768, AC004476, AP000359, Z81364, AF176915, Z97183, AC005399, AP000687, AL034417, AL009181, AL035413, AC006006, AL109798, AC002477, AL135744, AC006317, AL031685, AL021407, AC005095, Z93017, AF134726, AF030453, AC005488, AC006141, AF024533, AC007055, AC002990, AC006930, AP000512, AC007250, AC007687, AC004534, AC007308, AC005332, AL034429, AL021331, AC006449, AC004518, AL034582, AC016025, AP000031, AC002395, AL080243, AC005531, U80017, Z93023, AC004922, AC005519, AC005914, Z83844, M63544, AC010077, AB023048, U91319, AC004895, AL022722, AF109907, AL139054, L47234, AL034423,

			AC005005, S42653, AC005821, AL050307, AC004878, AL031659, AC005755, AC005666, AC004531, AC006014, AC002059, AC005871, AC004686, AE000658, AC005722, AC007363, AC004262, AC004805, AL109827, AL121572, AC005212, AC002545, AC004820, AC005527, AC002369, AC006277, AC003982, U85195, AC002558, AC004098, U07563, AC007011, AC007774, AC006312, AL023882, AL021453, L44140, AC004447, AP000518, AC004223, M30688, AC005228, AC005011, AL132992, AL031230, Z94802, AC005529, AC007559, AC004785, AB023054, AC007387, AF067844, AC004802, AC005261, AC005520, AP000346, AC002470, U62293, AL033392, AP000552, AC005625, AC006236, AC006318, AJ004799, Z97054, AC005479, AP000008, AC005618, AC005037, AC005565, AL009183, AC002316, AC000025, AC005182, AC006537, AC007151, AC002119, AC007384, AC007536, AL022323, AL034449, AC000379, AC005696, AC002544, AC005192, AL031670, Z77249, U95740, AL096678, AC007666, AC004551, AL031257, U89337, AC003962, AC007227, AL133500, AB035355, H54670
2060	HOUHL17	895372	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1999 of SEQ ID NO:2060, b is an integer of 15 to 2013, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2060, and where b is greater than or equal to a + 14.</p> <p>AI672040, AL037809, AI921086, AW205338, AI346874, AI379288, AI057116, AW152412, AA643506, AI753970, AW297898, AI089940, AI151007, AA747432, AA781418, AI287276, AI949867, AW055035, AA809274, AI375114, AA314065, AI610827, C05162, AI042079, AA449983, AI301820, AA436528, AA857802, AI695102, AI569128, AI287893, AI144264, AA831336, AW102601, AI933705, AI274322, T75244, AW449770, AI004208, AA436477, AI914752, AI580398, AI435344, AI025856, AI401764, D19611, AA632414, AA865513, AA872400, AI168700, AA459889, AI273820, AI124065, AA724118, R38638, AI269172, AA453119, F13485, AI467814, AI630648, C04391,</p>

2061	HDPB40	895675	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2581 of SEQ ID NO:2061, b is an integer of 15 to 2595, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2061, and where b is greater than or equal to a + 14.</p>	<p>AA448779, D57975, AI474663, AA627283, AW351677, AA362005, T06370, AA581145, F11298, H03672, AA383368, F08958, D62803, H03671, AI264956, C16419, F10353, AW388337, AA243374, AI796664, AI758552, AI695343, AW391667, AI800690, AI539480, H87103, AW150643, AC008498, AL021997</p> <p>AI223386, AI279733, AI453754, AA838730, AL043887, AI373900, AI080395, AI223392, AI750397, AA813783, AI911812, AA253429, AI799380, F09731, AL043886, T81826, AI221738, T65287, T65235, AR052513, D50419</p>
2062	HWLOI29	895781	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 540 of SEQ ID NO:2062, b is an integer of 15 to 554, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2062, and where b is greater than or equal to a + 14.</p>	AC006050
2063	HCRM147	895927	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1834 of</p>	<p>AW084003, AA570505, AA526186, AW006250, AW007762, AI458032, AA149494, AI799666, AI341557, AI084783, AI190971, AI377966, AI085276, AI972710, AI962810, AW148913, AI380460, AI123203, AI122890, AW007426, AI863238, AA603986, AI307748, AI921067,</p>

			SEQ ID NO:2063, b is an integer of 15 to 1848, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2063, and where b is greater than or equal to a + 14.	AA149490, AI280975, AI336463, W73495, AI367500, W73595, AW149089, AI814701, AI766921, AW450642, AA235464, AI189309, AW072576, AI129064, AA574230, AA292528, AA650188, AI589229, AW294024, AI580733, AA037024, AI288103, AA877009, AI660255, F24537, AA578293, AA047125, AA864573, AI274628, AW188597, AI572782, AA374109, AI866359, AA558228, AA621604, AI264439, AA658397, AI652870, AA573559, AA573997, AI567038, Z39737, AW236431, AW243333, T81066, AI684973, AA034505, AW377101, AA372354, AA047126, AB027466, AR035961, AR037874, AR035966, AR035967
2064	HLDXE66	896008	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 473 of SEQ ID NO:2064, b is an integer of 15 to 487, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2064, and where b is greater than or equal to a + 14.	AI500518, AW328444, AW327862, AI971783, AW328440, AW328380, AW328614, AW327796, AW007896, AI628924, AW410322, AW409642, AW328007, AW328376, AW087373, AI754439, AW409590, AI287514, AA551550, AA501684, AI440000, AA603360, AI818460, AI201181, AI610070, AW409683, AA535393, AI699829, AI559540, AI560651, AA574413, AI827247, AW328350, AW328609, AA513486, AI754460, AW134985, AI755116, AW007719, AA283266, AA854768, AI497632, AA772414, AA496883, AW328320, AA679713, AI050044, AW020501, AI619744, AI339813, AA886011, AW250421, AI274211, F32918, AA579416, AA632536, AI567937, AI831479, AI151481, AI186976, AA877933, AI185119, AI620681, AA757769, AI690593, AA714364, AA558105, AI922235, AA632723, AA843775, AI924171, AI961721, AW250755, AW090148, AA491636, AI338728, AI123375, AW090155, AW081336, AI539209, AI890302, AW245791, AI573062, AI028444, AI863898, N64026, AI439763, AA847963, AI749978, AW261931, AI634383, AI191638, AI198771, AI719450,

AI344453, AI718439, AI268677, AI631303, AI253560, AW250772, AI796657, AA536044, AA569292, AW169077, AI570813, AI697471, AI149358, AI355377, AA610275, AI674831, AI114866, AI565047, AI193415, AI571454, AW262848, AA600356, AW316876, AA536172, AI185211, AI660181, AW273029, AI818029, AW192285, AA580796, AI719806, W73177, AW080272, AI619835, AI620986, AI830017, AI478688, AI925379, AI813549, AI683998, AI745129, AI491901, AW338471, AI582160, N91538, AW090784, AI610180, AI697356, AI660159, AI925537, AI224078, AI859783, AW028278, AA598891, AI281231, AI289421, AW305195, AA908802, AW073669, AI800405, AI342580, AI432916, AW170472, AA513180, AA653476, AI272858, AI963461, AI620289, AI523503, AI891159, AI475307, R02544, F24388, N32326, AI270199, AI924530, AW242012, AA448266, AI557537, AI560707, F20364, AI754142, AA776791, AI206373, AI189997, AI510744, AA723534, AI831263, AW105711, AI979037, AA873052, AW118551, AI673755, AI951247, AI962912, AA737215, AW005146, AI624705, AA662258, AW023162, AA609197, AA984855, AI983037, AI921779, AI734902, AI573083, AI718498, AW170473, N32870, AI924173, AI523495, AW166489, AI860956, AW073952, AI818256, AI000938, N31753, AI583997, AI749136, AI333494, AA580751, AA879000, W85708, AA508174, AW328608, AI439940, AI689023, AI983079, AI924195, AW188874, AA491865, AA312014, AA908266, AI160628, AI860497, AI185035, AW084818, AI557538, AW273989, AW148607, AI735229, R16758, AI333611, AW079820, T50503, F21939, AW337470, AI160685, AA507934, W37825, AA483482, AW248884, AA046751, AI654327,				
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2065	HAIBM54	897234		<p>AI969498, AW245433, M36072, AC000089, X06705, AJ224080, AC004217, X61923, X52138, AC002107, AL034417, AB023058, AP000521, AL022723, AF055066, AJ224082, AC004192, AC004172, AJ224081, X15013, AC000399, AC005042, Z84469, D63790, AC004129, AL031736, AC007110, AL078595, AC002452, Y17212, T51109, T55719, T56886, T58519, T59899, T59990, H50847, H98782, N24572, N34014, N95637, W69735, AA025830, AA070711, AA079673, AA084650, AA085276, AA102516, AA148893, AA150738, AA156887, AA181948, AA187531, AA425933, AA428802, AA226324, AA279495, AA480450, AA484692, AA523996, AA535068, AA554440, F15687, AA586409, AA602157, AA603678, AA610650, AA632560, AA580635, AA730447, AA737209, AA862929, AA863478, AA885536, AA886913, AA954603, AA962430, AA975386, AA976970, AA991428, AA999672, N87911, AA641479, AA129690, AA211080, AA400765, F20644, AA775513, AA283334, AI078081, AI078082, T11296, AA693434</p> <p>AW245845, AW245888, AW247437, AA226733, AA019081, AA325881, AW247424, AA324707, AI802708, AA315689, J04469, Z13969, X59737, Z13968</p>
2066	HSXAX45	897524		<p>AI459464, AA808743, AI144559, AA861434, AA404217, AA630335, AI831253, AI248728, AI870869, AA618605, AI458793, AI027413,</p>

	<p>nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 772 of SEQ ID NO:2066, b is an integer of 15 to 786, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2066, and where b is greater than or equal to a + 14.</p> <p>AA918131, AI128366, AW405777, AI800139, AI805659, AA569324, AI138987, AI333605, AA461611, AW189901, AA461439, AA586689, AA915895, AA991975, AA642111, AI033160, AA459952, AA503924, AA622287, AI126939, AA724107, AA460041, AI215829, AI312833, AA772627, AA442303, AI936227, AI200468, AI282278, AI167870, AI130767, AW130869, AI813604, AA847250, AI151532, AA437238, AI338407, AI192747, AI283778, AI460353, W56676, AA757574, N57307, AA676676, AI371859, AA992661, AI087026, AI669032, AI149595, AW406281, AA946707, AI245790, AI198433, AA831222, AI075992, AW073856, AI763210, AA442843, N21005, AI952652, AA508853, AA486261, AA526931, W40406, AA486260, AA024930, AA284849, N29407, AA768383, W40407, AA437013, AA024825, AI185523, AA722830, AI349462, AI250412, AI269354, AA133169, AA894509, AW170573, AA921691, AA284802, AI302348, AA292566, AI193841, AA578220, AA507115, AI862001, W37391, AI022024, W24131, AA740528, AI186092, AI467975, AW103067, AA524571, AA229574, N95179, R62977, AA634150, N32209, AA235699, H96097, AA658144, N57342, AI206465, AA640985, AW004616, AI016392, AA143283, AI262367, R63032, R99896, AW406045, AI125021, AA143393, AI523228, AI339136, AA946883, AI347544, AI188553, R92363, AA177015, F31926, AI679670, W37497, AI583398, AI202671, H04881, AI033929, AA876042, H20673, AA298828, R79287, AI051474, N99131, AI817004, AA687956, R79180, AA635984, AI138519, AI270668, AA693744, AA297347, N70831, N47384, T54362, AI216682, AA297222, AA587485, N32134, AI066418, AI300272, AA296828, AA298518, R99897, AA298240, AI833094, AA298536, AI186393, H22510, AI189398, H22509,</p>
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2067	HE8PB56	897898	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2007 of SEQ ID NO:2067, b is an integer of 15 to 2021, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2067, and where b is greater than or equal to a + 14.</p>	AA662435, N41466, N58333, D31322, AA907280, R76074, AA297370, H04783, T85291, AA298741, AA302967, H27066, AA404603, AA298381, AA297378, AA765280, R35471, AA302689, H79531, F36801, AA927760, AA298514, H73217, AA298519, N25286, F24740, AA112093, AI216691, AA083801, AI970763, N77700, AA297394, AA452564, N25282, AA247750, H65350, AI563987, AI146648, W51900, W01428, D31025, AI989423, AA536023, AA297194, T85501, AA093872, AA876242, AI420825, AI685575, AA229674, AA297898, AA552821, AI650972, AI434732, AA297186, W69409, R34274, AA297309, AI950138, AA094185, H27270, AI636819, AA648182, W21537, H65557, N79089, W69596, AI500252, AA552687, H73717, AW008699, W21396, N95173, Z69043, Z68129, U52111, X90583, Z19087, AF174394, AF100694, AF125570, AF118386, AL049963, AL080096, AL080106, H37822, AA507362, F18464, D19878, AI127803  AW167175, AI740811, AI814625, AW372977, AW379570, AI830090, AA843925, AW372976, AW269507, AW379557, AI378931, AI817634, AI858698, AI828457, AI694126, AW392769, AI830092, AI422742, AI400366, AI092688, AI890963, AI679511, AI913025, AA253194, AI419413, AI811323, AI951020, AI022434, AI683943, AI525592, AA568164, AA688138, AI452382, AI146463, AI400768, AI288461, AA906505, AI924309, AI167393, AA654360, AA186897, AI004583, AA775509, AI493331, AA614431, AI346389, N62092, AA626034, AI023936, AW043643, AW273008, AA159711, AI921444, AA159816, AA482352, W38893, AW268508, AI970751, AA588751, AI077673, AA016243, AA586975, AI985699, AI587086, AI860660, AI475132, N95055, AI075057, AW274617, AW304099, AA160381,
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	AA506029, AW238652, AA086218, AA482254, AI436339, AI291597, H99748, AI278514, AA610151, R63720, R70906, AA471074, R77169, AA079633, AA480373, AA468385, AW302595, R82584, AI446687, AI283412, AI816752, H97740, AA9332817, W93394, R82585, AI682734, AA844033, AA639961, AI880674, AW104925, AW261859, H21696, AI291596, H01942, AI168626, AA935864, AA580370, AA258741, AA618219, W93362, AA258377, AW238247, AI190841, AI091676, AA328654, AI932899, CI7106, AA297487, AA159815, D79077, AA158761, AW134560, R70993, W79646, AA296799, AA159710, R63767, R70905, AA159565, AI472890, AA298549, AI492053, AA016203, AI811530, AA469417, AA076609, AA468424, AI202629, AI858629, AA297628, C00038, R27158, H21906, AI268312, AW242097, AA298285, AI955543, R39395, AI471235, AI572472, AI383070, AI049608, AA631038, AA188520, AA298874, AI369025, AW190612, AA297272, AW379900, CI7487, AA385499, T48546, AI887113, AA297236, AA328285, R38317, AW265590, W93606, R23770, AW050524, AA372564, R32172, AA583881, AA253195, R32216, R70940, AI000172, R23723, AA100383, AI572289, AW238464, AA352092, AI890265, AA382912, AW117913, AA076610, N87013, AI813387, AA340827, H04495, C06417, H23455, AI474703, T24990, AA203668, AI561317, AI917619, AI858794, T10423, R26913, AA079807, AI350112, AW384494, W32530, AI866316, AI436481, AI619820, AI307557, AI135545, AI434731, AW268743, AI690687, AI274811, AI799540, AI761468, AW079334, AI624529, AW059828, AA665587, AA971033, AI564500, AI499325, AI567940, AI633062, AI309306, AI267185, AI345677, AW071417, AI634457, AI784214, AI445069, AI076344, AA659410, AI537677, AI225000, AI860027,

AW191844, AI473451, AI922550, AI161279, AI249274, AW410302, AI401697, AL023582, X70685, AF113019, AI8777, AL080110, Z97214, A52563, AI2297, AF151109, I48978, X72624, E01573, E02319, I89947, AL050277, E06743, A23630, E12580, A08907, AF131821, AL117626, I17544, AL050155, AR068466, AL137480, U77594, AF028823, X66871, I33392, M27260, AL049283, A08913, I09499, AL137488, A58524, A58523, A12522, AF118094, A08912, A08910, A08911, A08909, AL110218, AR038854, AF031903, A08908, AF031147, AF039138, AF039137, A18788, S76508, AJ012582, AF065135, AL080154, A45787, AL137275, AL117394, AL050138, L13297, I18355, S36676, E02253, I34392, U35846, S77771, I89931, AL117648, Y10080, AF097996, E12579, AF114168, AL137529, AR029490, I49625, AR068753, S83456, U92068, AF183393, Y10655, AF117959, X76228, X87582, AF215669, AL137523, AL137648, X55446, AF185614, U78525, AL110222, AL133606, I68732, AR011880, I89934, A93016, E08516, AL035458, AR068751, AF090934, X83544, AL122106, AL137574, AF177401, AL080148, AL137294, AL096751, AJ005690, AL137550, X98834, I08319, E15569, E02914, Y11254, A76337, A76335, I92592, A91160, U37359, AL049466, AF044323, S68736, AL137665, AL110269, AF081197, AF081195, AC004213, AF087943, AL137530, AF184965, AL136842, X65873, AF000145, AJ004832, S78214, A21103, AL110171, E05822, A90844, AF111849, M86826, AL117649, Y09972, E08631, U73682, AL137521, AF090901, AF140224, I48979, S54890, A65965, AB019565, A57389, Y11587, X84990, AF017152, D00174, AF112208, AL080162, A65943, M92439, M80340, AC004200, E12747, AF111112, M19658, AJ001838, A08456, AJ000937, AF118090, AF109155, AL110158,				
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2068	HTPGE66	898087	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 251 of SEQ ID NO:2068, b is an integer of 15 to 265, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2068, and where b is greater than or equal to a + 14.</p>	<p>AL117457, AL122045, AL137284, AL137533, U57352, Y14634, I32738, A08916, E01614, E13364, A03736, AB029065, AF069506, J05277, AF104032, AL133623, S63521, AL137478, U76419, AL110221, AJ003118, AF185576, S79832, U42766, AF022363, I89944, D55641, I41145, X63410, AL122110, AL049339, AF130470, AL133640, AF013249, AL137271, AF141289, AF017790, AL133075, A07647, AF026008, X06146, AF004162, AL049382, AL080074, A70386, X61970, AF000167, AR055519, AL137627, AF091084, A92311, AL133069, AF017437, AL137283, A86558, AL137557, X79812, A77033, A77035, X62580, AL049430, X95876, AL137461, E02349, AF120268, I17767, AL137554, AL122100, AF043493, U87620, AF061795, AF090903, Y14314, AF151685, X99717, AF146568, AF090896</p>
2069	HWLIL19	898136	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 760 of SEQ ID NO:2069, b is an integer of 15 to 774, where both a and b</p>	<p>AA044731, AA044768, AW237077, AI818416, AI989722, AI826965, AW058201, AI445972, AA053091, AI587426, AW190814, AI923823, AA112375, AI587431, AI446688, AA053602, AI493214, AI991706, AA135893, AI798538, AI984082, AI803879, AI990405, AI932810, AI582971, AI917076, AA346311, AI521001, T93732, AI611349, AA135894, AI950541, AA172400,</p>

			correspond to the positions of nucleotide residues shown in SEQ ID NO:2069, and where b is greater than or equal to a + 14.	AI434008, AI913316, AI932552, AI431343, AC007688, AF095448
2070	HPJEE80	898157	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2606 of SEQ ID NO:2070, b is an integer of 15 to 2620, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2070, and where b is greater than or equal to a + 14.	AA314262, AI698145, AI751509, AI765378, AI819921, AI309793, AI983094, AI889488, AI691017, AI478725, AI418367, AI768787, AI336867, AA770272, AI579948, AI347373, AA773349, AA287318, AA187540, AA854659, AI637840, AI566584, AA305439, AA451739, AA287399, AA255886, AA689402, AI961717, AI624071, AA444697, H24906, R59469, AI636153, AL037168, AW151230, AA256684, AA694475, AI861989, H02063, H26485, H13596, AA256683, AA348853, AA336954, H02078, H44525, AA354340, Z43173, AA337732, AI565023, H44530, AW297887, R75751, H26324, AA336921, R41517, AA775352, AI638129, R18527, AA337380, AI870106, F11589, AI954448, AA336373, AA336703, C02323, AW391166, AI858347, AW379208, AA634601, AA449368, AI611218, AA262646, AI860650, AA282616, AL119399, AL119457, AL134524, AL119324, AL042544, AL119443, AW392670, AW372827, AL119391, AL119464, U46346, AL134902, AW384394, AL042614, AL119319, AW363220, AL119484, AL119497, AL119335, U46341, U46350, AL119341, Z99396, AL119363, AL119522, U46349, AL119355, U46347, U46351, AL119439, AL119444, AL119396, AL119483, AL119418, AL119496, U46345, AL134518, AL134528, AL037205, AL134525, AI142132, AI142137, AL134538, AL042970, AL042450, AL042965, AL042975, AL134529, AL042542, AL043019, AL042984, AL043029, AL042551, AL043003, AL119488, Z84466, U82319, Z98172, AC005225, AR060045, AL035687, Z65447, AB026436, AR060234, AR066494, A81671, AR054110, AR069079,

2071	HWLQX67	898192	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1462 of SEQ ID NO:2071, b is an integer of 15 to 1476, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2071, and where b is greater than or equal to a + 14.</p>	<p>AR043113</p> <p>AI120532, AI587307, AI093091, AI769686, AI050667, AI372945, AA250932, WI5253, N49198, W39173, AA894448, AA975408, Z21307, AA846588, AC002554, Z73358</p>
2072	HCRNK75	898355	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2210 of SEQ ID NO:2072, b is an integer of 15 to 2224, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2072, and where b is greater than or equal to a + 14.</p>	<p>AI799804, AA863125, AI823427, AI377127, AW168810, AA293513, AW088676, C17686, AI289654, AI207850, AI890720, AI805626, AI824271, AI344359, AI300131, AA574103, AI686750, AA315866, AI709243, AA252863, AA585439, AI758734, AW375857, AA348962, AI525556, AA585453, Z28355, AA585440, AI525316, AI535639, AI541510, AI546855, AA336552, AI541374, AI556967, AI525328, AI541514, C15189, AI541523, Z30131, AI526180, AI546999, AI541534, AI525306, AA585101, AW265668, AA585434, AI526140, AI541509, AI541365, AI382291, AI546828, AI541017, AI525431, AA585356, AI557731, AI557807, AI526194, C16300, AI547039, AI526196, AI541317, AI546945, AI535813, AI557799, AI540967, AI557262, AI525653, AI541508, AI541307, AI541535, AI557082, T11028, AI546899, D61254, R29445, AI557787, R28735, AI546875, AI541205, AL040510, AL040625, AL045817, AL041142, AL041238, AL041133, AL047183, AL040322, AL041131, AL046330, AL041051, AL041292, AL040119, AL047036, AL047170, AL047057, AL047219, AL041227, AL040463,</p>



	AL039915, AL043612, AL041197, AL040155, AL041346, AL040529, AL041096, AL047012, AL041358, AL041277, AL041163, AL041098, AL040621, AL043538, AL041324, AL040464, AL044162, AL041086, AL043496, AL041296, AL041233, AL043467, AL041159, AL045725, AL044186, AL041140, AL036500, AL134123, AL043950, AL040193, AL040252, AI142134, AL044037, D57491, AL040091, AL040128, AL040168, AL040255, AL040285, AL040342, AL040332, AL040617, AL040553, AL045684, AL040745, AL044029, AL040370, AL043677, AL046442, AL040839, AL041752, AL040149, AL043775, AL044165, AL043492, AL041602, AL045920, AL041278, AL038838, AL040253, AL044074, AL041635, AL045990, AL040458, AJ239433, AL044199, AL044187, AI525320, AL040263, AL040090, AL040294, AL040329, AL040082, AL044272, AL041186, AL040148, AL041730, AL041523, AL043627, AL046392, AL041374, AL040052, AL043845, AL043537, AL039338, AL042135, AL044064, AL039316, AL043923, AL038983, AL043814, AL043848, AL041459, AL043570, AL041577, AL044258, AL044201, AL046850, AL038532, AL040768, AL037727, T23985, AL040576, AL044377, AL046994, AL040414, AL040571, AI546891, AL046914, AL044771, AL045753, AI557796, AL049007, AL044274, AL079878, AL049018, AL043468, AL079876, AL042245, AL040444, AL039744, AL043604, AL045857, AL046147, AL044015, AI535660, AL044583, AL042700, AL037341, AL042712, AL043201, AL046097, AL045991, AI557238, AL038822, AI525321, AL045671, AL046327, AI541013, AA585476, AL041168, AL049069, AI526184, AL043444, AL041246, AL040472,

	AL040238, AL041955, AL041347, AI540920, C16305, AR017907, I13349, A91965, I66498, I66495, I66494, I66487, I66497, I66496, I66481, A83642, I66486, A83643, I66485, I66488, I66489, I66490, I66491, I66492, I66493, A83151, I66482, I66483, I66484, X81969, A25909, AR062871, AR038855, I18895, A85395, A85476, AR062872, AR062873, AJ244004, AJ244005, AJ244003, AR037157, AF082186, A20702, A20700, AR008429, A43189, A43188, A91752, I63120, A98767, A93963, A93964, A98420, A98423, A98432, A98436, A98417, A98427, A32110, Y16359, AR038762, I44681, D78345, A86792, X83865, A84772, A84776, A84773, A84775, A84774, AR054109, AR067731, AR067732, A58522, A91750, A18053, M28262, AJ244007, A93016, I15717, A58524, I15718, A58523, E03627, I49890, I48927, A02712, A77094, A77095, I84553, A81878, A95051, I84554, A18050, A23334, A75888, I70384, A64973, A60111, A23633, AR007512, I08396, A60212, I05488, I61310, A60209, A60210, A60211, I00682, A60961, A60977, A11624, A11623, E00609, E13740, A11178, E01007, A10361, AR027319, A91751, AR027318, A68112, A68104, A06419, A21892, A23997, A68114, A89633, A89634, A21895, A05160, A08030, A20502, I62368, A35537, A35536, A02136, A04664, A02135, A04663, U94592, I08395, I06859, AR043601, A11245, AR028564, AR002333, A60985, A60990, A47368, A60987, I19516, I19517, A76773, A22413, A29109, A32111, I63560, AR009152, AR009151, I63561, I63563, I03331, E12615, A02710, AR035193, E14304, A07700, A13393, A13392, AR031488, I13521, I52048, A27396, AR027100, I44531, I28266, I21869, I44516, A70040, E16678, A82653, E16636, I08196, I07249, I08776, I15353, I25027, AR068508, AR068510, AR068509, A63954, I91969, I26929,

2073	HOGDR01	898418	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 806 of SEQ ID NO:2073, b is an integer of 15 to 820, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2073, and where b is greater than or equal to a + 14.</p>	<p>I44515, I26928, I26930, I26927, I58322, I58323, AR003585, I25041, A24783, A24782, A92133, A95117, A90655, A38214, I56772, I95540, A95096, A95106, A95105, AF149828, I01995, I08051, AR031566, I60241, I60242, AR038066, A20699, E00696, E00697, E03813, AR027099, Y09813, AR051652, AR051651, Z32836, AJ230935, D50010, AJ230902, AR035975, AR035974, AR035977, AR035976, AR035978, I05558, AJ230972, A58521, A91754, AR031374, AR031375, AR020969, A92666, A92668, A92667, A92665, E12584, AJ230951, A70872, AJ231009, A22738, I08389</p> <p>AI940071, AW383315, AW383305, AW383297, AW392670, AL134527, AW384394, AW363220, U46351, AL119443, U46347, AL119522, AW372827, Z99396, AL119319, AL119324, AL119457, U46350, AL119439, U46349, AL119484, AL119391, AL043003, AL119483, AL119497, AL119401, AL119363, AL119444, AL119355, AL119396, AL134525, AL037205, U46341, AL134531, AL134902, AL042984, U46346, AL119418, AL119399, AL119335, AL042542, AL134538, AL043019, AL042544, AL042965, AL042975, U46345, AL042614, AL043029, AL042989, AL042450, AL042551, AL119464, AC003965, AB026436, AR069079, AR066494, AR060234, A81671, AR054110, AR043113</p>
2074	HHATR06	898427	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1473 of SEQ ID NO:2074, b is an integer of 15 to 1487, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID</p>	<p>AI797684, AI478733, AI990902, AA456267, AI751749, AI970534, AI379565, AW239200, AW294114, AA427646, AI751750, AA594137, AA947297, W95460, AI057073, AA405402, AA788855, AW068453, AW068711, AW177719, AI341112, H73236, AW167569, AA232452, AA27487, AA041328, W95567, AI652166, AA853047, H74164, R34003, AA041304, W02069, AI341381, AW192052, AA580289, AL119457, AL042544, D30965, D31176, AL119324, AL119399, AI918637, AL046052, AL042866, AI690472,</p>

	NO:2074, and where b is greater than or equal to a + 14.	<p>AI918408, AL045891, AI689380, AI433206, AI699857, AW024793, AI345261, AI096694, AL134902, AI241884, AI371228, AI582912, AW022102, AI446405, AI564160, AI918554, AI273919, AA838230, AW083489, AI865942, AW194441, F36003, AI499104, AI887775, AW151974, AW079432, AW058275, AI918634, W79826, AA291456, AI952584, AI634930, AI580213, W33163, AI281412, AW008253, AI686081, AI921922, AA749024, AI125845, AI472476, AW085866, AA480074, AI131320, AW022494, AI313352, AI310920, AI307503, AI671284, AW020288, AI612732, AI933926, AI336585, AI334913, AI349266, AI349787, AI334452, AI344938, AI701897, AI312146, AI312339, AI309431, AI340537, AI312165, AI345258, AI349288, AI349628, AW196105, AA835966, AI340610, AI307459, AI343140, AI349971, AW168693, AI307507, AI348879, N22406, AI340639, AI311604, AR035969, AF117959, AF108357, L24896, U77351, Y00093, AF085809, AR068466, E12579, AR060234, AF074604, X62773, M30514, AF093119, A07647, AJ006417, A94751, AF188712, AL050092, AL133568, AL137461, AJ012582, M79462, AL133629, AL117644, X60786, I46765, AL137658, AL110280, AR011880, AR034830, I96214, AL049464, AL133098, AF102166, I00734, AF022813, E00617, E00717, E00778, U89295, E02253, AL137665, A90832, I29004, X66417, U79414, AF161699, Z22828, U92992, AF155119, AL096720, Y11435, AF113694, X54971, Y10080, AF040723, AF051325, AL133081, AL133014, A52563, X87224, AL133054, L40363, AL137276, E02914, AL110171, Y10655, AF118064, AL049314, AL137558, L31396, U68387, AL137656, AF010191, L31397, AF151109, AF140224, AL110159, X76228, S63521, U92068, AF148129, AF081366, Z72491, S69385,</p>
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2075	HLQDM07	898541	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2372 of SEQ ID NO:2075, b is an integer of 15 to 2386, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2075, and where b is greater than or equal to a + 14.</p>	<p>AF120268, X92070, AF026124, U57352, Y14634, U91329, AL137267, Z48796, AC007458, AF017437, AL133636, S61953, L78810, AF213396, U67328, AF114818, AF113676, AL137534, AF016271, AJ004832, S75997, AL133558, E15582, AL117585, S73498, AF118558, E04257, AR005011, U80919, AP000130, AP000208, AP000247, AL035458, AC005488, AF144700, AL050280, AF159148, E15324, AL080158</p>
2076	HDPBW68	898651	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 3879 of SEQ ID NO:2076, b is an integer of</p>	<p>AI806250, AA455382, AI084580, AW368035, AA005065, AI088155, AI566044, W92235, AA706063, W92236, AA299662, AA004847, H56718, T77776, AA002009, AA227236, AI922495, AA722941, AA456022, AA299663, AA001788, H56641, AL119457, AW392670, Z99396, AL119319, AL119355, AL119324, AL119497, U46350, U46351, AL119363, U46349, AL119391, AW372827, AL119483, AW384394, AL119341, AW363220, U46347, AL119484, AL119443, U46341, AL119444, U46346, AL119439, AL119522, AI142134, AL119396, AL119335, AL043033, AL037205, AL119401, AL134538, AL134542, AL134528, AL134902, AL134531, AL134533, AL119418, AL119399, AL042984, AL119496, AI142132, AL134525, AL134536, U46345, AL119464, AL042450, AL042614, AL043029, AL042544, AL043011, AL043019, AL042542, AL042965, AL042975, AL043003, AL042551, AL132826, AF169677, U42975, AB026436, AR066494, AR060234, AR054110, A81671, AR069079</p>
			<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 3879 of SEQ ID NO:2076, b is an integer of</p>	<p>AI797914, AA232727, AI264354, AA242826, AI373844, AL121152, AI693559, AA293798, AA242961, AI681069, AA987481, AA253496, AA865918, AA394280, AA699441, AW193319, AA534330, AI246675, AI690035, AI921391, AI696791, AI696792, AI962498, AA478182, AA845215, R02588, AA501984, AA253392, AA975909,</p>

			15 to 3893, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2076, and where b is greater than or equal to a + 14.	AI141321, AI359321, R02707, AI370136, AI424757, AA236520, AA065210, AI369930, AA064845, AI217878, AI470976, AI640699, AL119324, AL119457, AL119399, AL042544, AL119443, AW392670, U46346, AL119355, Z99396, AL134525, U46351, AL119319, U46349, AW372827, AL119483, AW384394, AW363220, AL119497, AL119484, AL119363, AL119391, U46350, U46347, U46341, AL119444, AL119341, AL119418, AL134902, AL119439, AL119335, AL119522, AL037205, AL119396, AL119401, AL134538, AL134527, AL119464, AL042450, AL043033, AL042984, AL119496, AL134536, U46345, AL042433, AL042614, AL043029, AL043011, AL043019, AL134542, AL042542, AL042965, AL042975, AL043003, AL042551, AF113925, AF126484, AF149774, AC006027, AB026436, AR060234, AR054110, AR066494, A81671, AR069079
2077	HISCJ15	898814	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 3219 of SEQ ID NO:2077, b is an integer of 15 to 3233, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2077, and where b is greater than or equal to a + 14.	L44393, AA434356, AI524406, AW062354, T31737, H14980, Z43676, N40577, R08471, N25869, AA256007, N41934, N28530, AA808513, T92387, R02302, AW383005, AB011165, AF117754, AR022169
2078	HICYBH77	898946	Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2967 of	AW376967, AW268365, AI433801, AW087894, AW192424, AA573318, AW376970, AA186803, AI744244, AA179345, AW264850, AW239439, AI860613, AA128911, AI800522, AA179578, AI270669, C18854, AA186804, AA505958, W63641, W52261, AL036582, R50884, H17527, AA033538,

2079	HPJAS61	899130	<p>SEQ ID NO:2078, b is an integer of 15 to 2981, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2078, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2444 of SEQ ID NO:2079, b is an integer of 15 to 2458, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2079, and where b is greater than or equal to a + 14.</p>	<p>AL048651, AW149146, AA305384, AW273640, R50765, C17088, AA356773, AI698410, R07093, AA134840, AI985957, AA808140, AA367305, W79703, AA381398, AF123887, AF144695, AR018794, AR018857</p> <p>AA630313, AW007113, AA056282, AI302077, AI685736, AI416978, AW275894, AW236942, N24240, N63404, AW167603, AI031828, AI624036, AA622513, AA857986, AI274802, N63417, AI394098, AA543071, AI075944, AI347803, AI134813, AA010795, AI991823, AA608692, AW188444, AI765847, AI580486, AA488368, N38923, N30935, AI093100, AI453400, AI434592, AI300853, AA457119, AA455498, AI880713, AW050861, AI274340, AI309910, AW207240, AA633538, AI188595, H98907, AI308095, AI863003, AA705931, AI165111, AI066618, AI261549, AI470214, AI282600, AI635033, AA011134, AA583904, N95694, AA973598, AI623738, AA035768, AA977967, W70190, AI027298, AW370853, AW167630, AW083766, AW166334, AA599424, AI864628, AI831364, AI610395, AI245485, AA649888, AI672081, N72372, AA293614, N95723, H77346, AI270457, R53634, AA829048, AA062785, AA479044, AA826668, T65751, H58487, H81750, AI092643, AA190410, AW300733, AW264761, AW020656, AI750198, W78204, N68016, AW242190, N41700, W70063, H81751, AI750199, AA781623, AA298516, AI247290, AI925804, W57582, AW026566, AI932535, AA724052, AA488500, AW150513, AI309181, AA627576, AA430543, AA430544, R87874, AA369400, H77345, AA468680, AA853269, N52644, AA130245, AA157200, AI160148, AA834736, AA705668, AI124918, AA156892, AA948320, AI609381, R45075, AI701123, AW178256, AA376537, AA296785, AA190800, H52032, AI673683, H57644,</p>
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	N94353, AI433372, AW167732, H84917, AA298517, AA971449, T65826, AA729816, AA588601, AA477526, AA455499, AI623220, N43974, AI954242, AI401060, AW002427, AA369401, AI927604, AI654863, N35904, AI636667, AW025939, AI587427, AA297348, AI493644, C01875, AI290317, H85246, AA916819, R51967, AI249975, Z20911, N46495, W70132, AI583578, AI886415, AW075382, AI590043, AL045413, AI539260, AI333104, AI559752, AI538850, AW051088, AI284517, AI621341, AI927233, N25033, AA808175, AA579232, AI696603, AI371251, AW162194, AI114703, AI680467, AA587590, AW089233, AL120056, AW089844, AI691088, AI491904, AI539800, AL042365, AW073898, AI623941, AW059828, AI491852, AW020397, AI267185, AI587156, AW327527, AI860027, AI684164, AW409862, AL046944, AI590415, AL038505, AI282669, AI524654, AI698391, AA514684, AI445611, AI811603, AL047100, AL047344, AI475371, AI435253, AI401697, AI341838, AW128834, AL079799, AI473208, AI926330, AI683395, AW083572, AI872847, AI884303, AI890223, H41759, AI479577, AI627714, N75779, AI866465, AI270183, AL121496, AL036954, AW118553, AI950877, AI805671, AF178532, AF200342, AF200192, AF204944, AF117892, AF050171, AF051150, AF201468, A74674, I48978, AL049466, I89947, X93495, AF013249, I09499, AB029065, A77033, A77035, I33392, AB026995, A70386, S36676, AL137488, U75604, AR029580, X66871, AF076633, A91160, U87620, A91162, AL117587, AL080140, AR034821, AL133049, U49908, AF017437, AF111849, AB016226, AF119336, AF111851, AL133088, AF082526, A07588, AF118090, AF022813, AL137558, AF158248, I48979, A21103, X79812, AL122123, AF126247, AJ238278, AF112208,



	U72621, U89295, AR038854, AL050208, AL133062, AL133010, AL137480, Z97214, AL050092, AF079763, A03736, A86558, A76335, AL110296, AL137529, AL137256, AL137533, A08910, AL137550, A08909, AL137554, S82852, U35846, AF102578, AL110159, A08908, AL133558, Y11587, AL050277, A08913, AL137271, AF061795, AF151685, AL122121, AL133560, AL133637, AF115392, AL133606, AF026816, U75932, AL117648, Y10655, AF113019, Z82022, S83440, AF106657, AL133619, AL137461, AF100931, AL137530, AF200464, E06743, S78453, AJ000937, AL137560, X80340, AF141289, AF185614, AL117435, U51587, AL137627, X76228, AL137557, AL133081, AL117416, AF026124, AL122100, I32738, AB029066, L13297, A08907, AF111112, AR020905, AL137478, AL137281, U37359, AL110224, AJ006417, J05277, A41575, A65340, Y10936, E12580, U83980, A08912, AL110221, AF090900, U73682, AR068466, AL080148, AF002672, A18777, AF097996, U92068, E03671, AL122050, AL137258, AL080234, E01314, U57352, AL122118, U80742, AF061573, E05822, AF115410, AL080124, U37312, A08456, AL133084, Y11254, AF131821, X89102, AF183393, AL133557, U68233, I92592, AL117457, AF058921, AF162270, S76508, AF019298, AF057300, AF057299, AL137479, I68732, A08911, A18788, I89931, X97332, L04849, AF119337, AL049324, Y10823, AF067728, AL050024, X83544, AF031147, S77771, X84990, AF106697, I89944, I89934, I08319, I49625, AL049283, AL133080, AF087943, AF107847, AF069506, AF176651, AF068615, AF159615, AL133624, AF036268, AL137284, U95114, A52563, AL133113, AL110280, A58524, A58523, AL136884, AF090934, E12579, AL049382, U53505, L30117, AF047716, AL133075, U62966, AL117440, AF185576, AF047443, L04504, AL137463, AF182215, S61953, AL137657

2080	HCRMK25	899224	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2636 of SEQ ID NO:2080, b is an integer of 15 to 2650, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2080, and where b is greater than or equal to a + 14.</p>	AA704087, AW373819, AW380680, AI752796, AW385372, AW373887, AI906013, AW385383, AA428419, AA780507, AA668306, AL036004, AA600085, AI751526, AI751512, AA780554, AW239513, W49750, AA773949, N36271, W63574, AA780819, AA457563, AI753606, AA464937, AA454895, AW385419, AI905876, AI752292, AA181456, AW068389, AI751743, AA457359, AI751229, AI752349, AI365966, AA293647, AA554805, AI752176, AI751283, AA489941, AA457511, AI751586, AA788961, AW352231, AI752829, AA487731, AA789233, AI750701, AI752337, AA487393, AW373901, AA457430, AA704140, AA457469, AI905974, AA169848, AA703999, D79055, AI752205, AA434290, AA489933, AI752293, AI750735, AA434353, AA489957, AA780675, AW352222, U53087, AI205280, AA248177, AI752797, AI752212, AI751798, AW373788, AI752270, AW373787, AI925580, AI752737, AW373833, AA121851, AA456983, AI752171, N34179, AA458778, AA454883, AI751523, AA679516, AA176804, AI751887, AW393626, AI751886, AI751494, AW384994, AI751927, W24625, W00702, N56826, H92997, AI750235, AA359326, AA663346, AI751476, W52302, R71009, AW373902, AA486177, AW067996, AA961963, AA594126, AA476858, AW385424, AW067845, AW068346, AI751810, AA774078, AA399202, AI751928, AI750740, AI676195, AW373802, R73275, AW068267, AW373874, AW370489, AW373808, AI751228, AI750278, AW373834, AA136731, AL039650, AI906084, AI752350, AA359001, AA453822, AA780557, AA453844, AA318038, AA373942, AA668143, AW373845, AI751652, AI745640, AW366380, AW370462, W24650, AA477811, AI963017, AA293756, H53916, AA169864, AI684315, AI752599, AW068076,
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AI910190, AA359296, AI902828, T53721, AI905031, AW362721, AA373886, H82181, AA434473, AA334411, AI922681, AI963366, AI752830, AA457291, AA668375, AA443350, R84909, AW067859, T29584, AW385969, AA339992, AA379018, AA326804, AW373804, AI677812, AA456909, AA489802, AI675919, AA373933, AI696990, R64077, AA669870, AI571571, AA378055, AA375369, AI752739, AA669843, AA376383, AA359377, N39634, AW384992, H94226, AA599521, AW363460, AA852286, AI752736, AA853052, W00543, AI750767, AI963411, T48176, AA373229, AA218722, AA853386, AA332082, AA359277, AW384999, AA372196, AA333869, AI796681, AL035880, AW082115, R69349, AA359183, AA359695, AA852609, AA366521, AA434079, T49549, AA853491, AA669422, AA377936, T53285, AA377860, AA595560, AA346953, AW068393, AA852626, AA359195, AA256215, H39823, AI801622, AA852524, T54840, AA070541, T49912, AI751621, AA359783, AA853295, AA339830, AA375308, AA507247, AA852945, AA853931, A91174, Z74615, K01228, AF153062, Z78279, U08020, J00836, V00401, AR048312, AB015438, AB008373, U03419, M14423, Y15915, AB015440, S64596, U62528, AF017178, X98705, S67482, M17491, X06269, AF169346, AF077329, Y15918, D83228, Y15919, M10571, X98707, X98708, Y15913, Y16346, J00112, Y16341, Y15914, Y15912, Y08643, Y15916, J00111, A65495, M12199, A65496, M23213, Y16342, Y16344, M11162, T49700, T50912, T53375, T99669, R01522, R31653, R32921, R35743, R65723, R72798, R77142, R79511, R91193, H50793, H52341, N45401, N50267, N94504, W05288, W05816, W25354, AA167235, AA167584, AA173693, H88449, AA987726, AA094624, AA852897, AA853611, AA853652, AA853657, AA853692, AA853790, AA852117, AA852484, AA852780,				
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2081	HNTRV11	899632	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2288 of SEQ ID NO:2081, b is an integer of 15 to 2302, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2081, and where b is greater than or equal to a + 14.</p>	AA852811, T49210, T49936, D45437 AI192806, AI636301, AW070460, AI264134, AI808610, AL047490, AW337234, AW272771, AA621722, AA902441, AW338001, AI572907, AW088299, AA630592, AW241806, AW338392, AW119186, AW361987, AI598101, AW079856, AI932992, AA314261, AI380908, AI571554, AA431144, AW362042, AI741945, AW029103, AI669353, AA906312, AA905193, AA424741, AI246132, AA188213, AI092692, AI129947, AA969200, AA495870, AA774660, AA835498, AA825370, AA432163, AI520696, AI624063, AI026883, AA888774, AA186360, AW390429, AI692914, AA262302, AA156547, AI289833, AI678753, N76487, AA676856, AA190635, N36869, AA512918, AI392858, AI571545, AA262303, AA216711, AI266014, R69932, AA625353, AA313402, AI589292, AI129465, AI765154, R62335, AI457879, H48412, N94959, AI218172, AI221051, AA577253, AA086067, AI439435, AA112358, AI241626, R80350, W03228, AA086066, R78186, N67050, W19215, AA192424, AI537627, AA694468, AA112357, R79484, AA192529, R77146, AA188562, AI250628, H73378, AW362686, T60051, H45701, AI281554, N95029, R62336, AW192059, H56566, AI445365, R09672, AA191164, W19537, T78819, H45752, H38567, N50462, N47345, AA973983, R62945, AI583154, AI342227, T60098, R45931, H98238, R23380, AA621137, R70102, H12066, R35435, AI583186, H03315, AA369106, W25341, R80240, AI263665, N31081, AI803872, AA757310, AI591357, T29421, R76607, R67545, AA622166, H16044, T82361, R71554, R71501, R09561, AI351896, N46139, N89847, AI802973, AA188660, F07783, H71048, H54185, H03316, F08108, R62997, T94841, AW338108, T94886, AL045149, H97241, AA630804,
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2082	HWLOU33	899644	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1944 of SEQ ID NO:2082, b is an integer of 15 to 1958, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2082, and where b is greater than or equal to a + 14.</p>	AA344563, F02937, AW316643, AI635890, H56567, H71561, R70103, AI985724, N27010, AA218591, N72946, R76608, AW366579, N49618, T73663, AI587589, M31516, I41330, I05091, I09215, M15799, U88576, S67775, M30142, I09216, I05094, A65264, AR031710, AR066586, AR066589, AF052110, M64356, S51407, AB003312, AB003313, AB003314, AB003316, AB003317, AR016514, AB003315, AR016512, AR016513, Z63791, I64711, AR016518, AR016516, I64714, M64652, AB003319, AB003318, S72858 AL037051, AL040992, AL042909, AL039109, AL045353, AL039423, AL039128, AL045337, AL039386, AL038531, AL044407, AL038025, AL036973, AL045341, AL037726, AW235098, AL038837, AL039659, AL039074, AL039625, AL039108, AL039648, AL039678, AL039629, AL037615, AL037639, AL039410, AL039538, AL036238, AL036196, AL039564, AL039566, AL036765, AL036767, AL044530, AI142134, AL038983, AL039509, AL037727, AL079878, AL039156, AL037436, AL037295, AL037435, AL037027, AL037335, AL049018, AL040576, AL037443, AL037343, AL036167, AL038532, AL037323, AL040370, AL040529, AL037601, AL037049, AL040052, AL044186, AL038822, AL041159, AL038838, AL039338, AL043814, AL043923, AL037742, AL039076, AL043845, AL040617, AL043868, AL041577, AL041459, AL044064, AL040294, AL041635, AL044037, AL042135, AL046994, AL040768, AL046850, AL045753, AL041752, AL045684, AL040625, AL041133, AL043570, AL043848, AL041374, AL043627, AL041523, AL041730, AL044074, AL041602, AL043492, AL040839, AL040510, AL043441, AL045671, AL046442, AL036158,
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AL039316, AL036132, AL046392, AL043677, AL043467, AL044258, AL040444, AL044272, AL040148, AL045920, AL044187, AL040458, AL046914, AL041238, AL045990, AL047170, AL040332, AL041142, AL044199, AL047219, AL044274, AL040745, AL040463, AL047183, AL040128, AL042096, AL040472, AL039077, AL040342, AL041168, AL040322, AL041186, AL039432, AL040119, AL044201, AL040285, AL040571, AL046327, AL044165, AL040091, AL045817, AL041131, AL040090, AL047012, AL047057, AL041292, AL041051, AL040168, AL041346, AL037341, AL041955, AL040414, AL043775, AL041096, AL039744, AL046330, AL041197, AL045989, AL047036, AL040553, AL040253, AL040155, AL040082, AL039360, AL045857, AL036117, AL040329, AL041358, AL043538, AL041163, AL041324, AL036725, AL037177, AL041098, AL041277, AL040263, AL043941, AL06064, AL041278, AL040255, AL038043, AL634028, AL06040, AL040621, AL040149, AL040464, AL041227, AL05981, AL037021, AL039150, AL040075, AL037600, AL037047, AL037643, AL039924, AL049069, AL045725, AL039915, AL041140, AL043612, AL036139, AL044162, AL036964, AL036163, AL043496, AL043537, AL039643, AL041296, AL040193, AL037054, AL036133, AL041086, AL040238, AL037085, AL038821, AL046147, AL038761, AL041233, AL036679, AL134524, AL036152, AL041246, AL045794, T24119, AL039085, AL080031, T24112, AL036207, AL079852, AL037569, AL036914, AW013814, AL043445, AL037279, AL046097, AL043422, AL037526, AL044603, AL043423, AL041210, AL036924, AL036268, AL039416, H00069, AL041347, AL036733, AL036900,				
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AL036998, AL046360, E13740, I13349, A10361, A91965, A22413, I19517, A76773, A35537, A35536, A92636, A02136, A02135, A04663, A04664, I08051, AR062871, A84772, A43189, A43188, A84776, A84773, A84775, A84774, A20702, AR067731, AR067732, A58522, A20700, A91750, AR062872, AR062873, A11245, AR027069, A20701, A52326, A04710, AR035975, AR035977, AR060673, AR060676, A49428, AR028564, A08458, A08457, AR035974, AR035976, AR035978, A00782, A02741, A14595, A18755, A25856, I12245, A13038, A29289, A49695, A49696, AR017907, A95051, A02712, A18050, A23334, A75888, I70384, A60111, A23633, AR007512, A18053, I06859, AR043601, A92133, I40851, A60983, I60241, I60242, A02710, E12615, AR035193, A07700, A13392, A13393, AR027100, I28266, I21869, AR036903, A70040, I66498, I66497, I66496, I66486, X73004, V00745, I19516, E02221, E01614, E13364, E03165, Z96142, Y16359, I01992, I84554, I84553, A51384, AR009151, D78345, I66495, I66494, I66487, AF118808, AF082186, AR037157, AR054109, A86792, A98420, A98423, A98432, A98436, A98417, A98427, AJ244004, AR022240, A85476, AR038762, A85395, X68127, AR031374, A49700, AR031375, A58521, AR020969, AR025207, AR036905, A38214, A44171, I56772, I95540, AR018924, A63067, A51047, A63064, AR018923, A48774, A63072, A48775, AR068507, AR068506, AR015960, AR000007, AR015961, A85477, A85396, AJ244003, A25909, A98767, A93963, A93964, I63120, A95052, AR043602, AR043603, A95117, A23998, A81878, I18371, U87250, A64973, A58524, A58523, A64081, A24783, A24782, E14304, I03343, A97211, A27396, A49045, E16678, E16636, I44516, A82653, A93016, I25027, D28584, I26929, I44515, I26928, I26930,				
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				<p>I26927, A58525, I49890, AF156296, AR000006, E16590, A58526, A91753, M28262, I00079, X16234, AF156294, I18302, AJ244005, AJ230933, Y11923, AR064707, A67220, A90655, Y11926, X83865, A15078, I00074, D88984, I03665, I62368, AR031488, I13521, I03664, I52048, I44531, E12584, AJ244007, I66485, I48927, AR009152, E00523, AR038286, I25041, I92483, I00077, AF156303, AR008430, I19525, E03627, AR063812, AR066494, A68112, A68104, A60212, A60209, A60210, A60211, I15717, I15718, AF156299, A77094, A77095, I08396, I07429, I00682, A11624, A11623</p>
2083	HAPNO50	899661	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1233 of SEQ ID NO:2083, b is an integer of 15 to 1247, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2083, and where b is greater than or equal to a + 14.</p>	<p>AI081543, AW024140, AA742572, AW327486, AA593332, AI239527, AI362956, AA977531, AA865071, W76539, AA988767, AI240922, W56688, AW406326, F25349, W56696, AI590417, AA773777, N80724, AW273295, N72158, AA356111, AA588352, AA576887, W52200, AA594466, AI002202, AW410884, F36934, T23069, AA335562, AI910397, R52145, AI962231, AA304020, AA593340, F35721, T08422, AA779395, D80166, C14331, C14429, D80038, D80227, D80195, D51799, D80269, D58283, D59859, D51423, D59619, D80210, D80391, D80240, D80253, D80043, D59275, D80212, D80193, D80196, D80188, D59927, D80219, D59502, D81030, D59889, D57483, D80022, D80366, D59610, D80378, D80045, D50979, D80164, D50995, D80241, D59787, D80024, T03269, C75259, C14014, D59467, C15076, C14389, D51060, D81026, AW178893, D80134, AI557751, AA305409, C14407, D51250, F13647, D80268, D80949, D58253, D80168, C14227, W21835, D81111, D51079, AA305578, AI989565, AW177440, D51022, AW179328, AA514188, AW178775, AW378532, D80522, D59695, AW352158, AI910186, AW377671, AI905856, AW369651, D80248, D52291, Z21582, D80251,</p>



	AW178762, D51097, AA285331, AW177501, AW177511, C14298, D80064, AA514186, D80133, AW360811, AW352117, C05695, AW176467, AW375405, AW378540, AW360834, AW366296, AA809122, AW360844, AW360817, AW375406, AW378534, D80132, AW179332, AW377672, AW179023, AW178905, D80302, D80439, AW179220, AW352171, AW352170, AW377676, AW178906, AW177731, AW178907, AW179019, AW179024, D59373, D80247, AW177505, D80014, AW360841, AW179020, AW178909, AW177456, AW179329, AW178980, AW177733, AW378528, AW178908, AW178754, AW179018, D51103, T11417, AW352174, AW179004, AW179012, AW178914, AW378525, T03116, T02974, D51759, D80157, AW177722, AW177728, AW367967, AW179009, AW178774, AW178911, AW378543, AW352163, C06015, C14344, AI535686, AW178983, AW352120, D80258, AW178781, D58246, D59503, AI525923, T48593, D51213, AI557774, AW378539, D59627, D58101, AW177723, D59653, D45260, AW177508, AI535850, AW367950, N66429, C14975, AW378533, H67854, C03092, D59317, H67866, AI535961, AL050297, A84916, A62298, A62300, AJ132110, Y17188, AR018138, X67155, A67220, D89785, A78862, A25909, D26022, X82626, D34614, D88547, X68127, AR025207, AF058696, A82595, AR008278, AB028859, I82448, AR016808, AB012117, A30438, Y12724, AF135125, A85396, AF066482, A44171, A85477, I19525, A86792, X93549, U87250, AR060385, Y17187, A94995, U79457, AB002449, AR008443, AR008277, AR008281, I50126, I50132, I50128, I50133, A45456, AR066488, AR016514, AR060138, A26615, AR052274, X64588, Y09669, A43192, A43190, AR038669, AR066487, AR066490, I14842, AR054175, U46128, D88507, AR064240, AR016691, AR016690, I18367, D50010, AB033111, A63261,

2084	HBSAK60	899776	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2115 of SEQ ID NO:2084, b is an integer of 15 to 2129, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2084, and where b is greater than or equal to a + 14.</p>	<p>AR008408, AR062872, A70867, I79511, D13509, A64136, A68321, AR060133, U87247, AB023656, Z32749, AF123263, AR032065, AR060382, X93535</p> <p>T18597, R28735, R29445, R45895, AA585325, AA585098, R29657, AI546875, R28892, R29218, R28965, AA585476, AA585101, AA283326, R28967, AA170832, D57491, D60844, R28895, D53472, AI557763, AI546971, AA585439, Z32822, Z28355, AI557262, D59436, AI557864, AI541356, C16300, AI557734, D61185, D61254, AI526140, C16315, AI541365, AI541013, AI525500, AI557740, C16305, C16293, D60765, AI541383, AI546999, AI546921, AI547250, D59751, C15406, D54897, D53161, AI546945, AI541374, AI525306, AI525856, D53447, AI541205, AA585155, C16292, AI526078, AI541517, AI546996, D55233, AI557731, AI525431, C15069, AI541535, AI547039, AI526184, AI525556, Z32887, AI525316, C16294, C15120, Z30131, D52835, AI541307, AI540967, AI547006, AI557787, AI557727, R29177, AI526194, C15737, R29179, C15762, AI541346, AI557807, AI546891, AI541523, AI526016, AI557084, D57186, AI525339, C16296, AI541527, R29262, AA585356, AI525320, AI547196, AI557758, AI547202, AI526191, AI541034, AI557408, R29172, AI557155, D60730, AI557602, AI540974, T19407, AI557718, AI557809, AI536138, C16290, AI526073, AA585453, AI526113, C14208, AI556967, AI557808, AI541321, AI557279, AI535660, T41289, AI526180, AI546829, AI535639, AI526109, AA174170, AI557039, AI540903, AI526195, AI547137, AI541422, T41329, Z33559, AI524904, AA514191, AI526024, AI526158, AI525656, AI526112, AI557533, AI525286, AI540920, AI541510, AI541345, D51433, AI546828, AI541506, AI546831, AI525332, D54850, AI541514, AI541027, AI557264, D59458, AI541415, C14723,</p>
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2085	HDPOD73	899866	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 774 of SEQ ID NO:2085, b is an integer of 15 to 788, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2085, and where b is greater than or equal to a + 14.</p>	<p>AA478514, AA478515, C00579, AI708851, AI581139, AA640563, R81679, AA367920, AL046227, AI433131, AI754257, AW117882, AI242236, AF113694, AC004813, AP000347, AL035587, Z95114, AC004883, AC005291, AF091512, AC004383, Z82206, AP000344, AC004987, AC006013, AF090900, AC005274, AL110280, AC002472, AC004594, Z98949, AC004686, AL022723, AC006115, AC005488, AC007298, AL021368, AL080124, AC004690, AL049759, AC004808, AL096776, AL021154, AL137705, AL021453, AC004213, AC004159, AC006112, AC006039, AL022336, AL022147</p>
2086	HWHHQ57	899885	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a</p>	<p>AI798964, AA886924, AW082915, AI015790, AI888102, AW305088, AW249524, AI677907, AW249655, AI685359, AI420026, AW250288,</p>

2087	HNFHY51	899913	<p>nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1336 of SEQ ID NO:2086, b is an integer of 15 to 1350, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2086, and where b is greater than or equal to a + 14.</p>	<p>AW008642, AI568918, AW245195, AI095605, AA307509, AA425494, AA146920, AI079724, AA742403, AA628536, AA425289, AA393886, AI075449, AI301574, AW020330, AA148122, AA738372, AA633222, AI908262, AA465300, AA463585, AA393791, R15429, AI554546, R16169, AA629523, AI193861, N50479, AA234353, AI863835, AA770378, AI927526, AA463677, R24974, AA384622, AI289080, AA143495, AA516015, AI039133, AA305089, AI094204, AA234408, AA653256, AW026433, Z45471, Z41168, AA135180, AI541233, AA135354, AI654673, AA746823, AA428026, R45235, AW337352, AI907894, AA152118, N93532, AI363444, AA865095, T24569, Z20397, AA070991, AA070717, AW189792, AW170538, AA906520, AA143494, AA886922, AI382046, D50645, AC005726, AC004807, D50646, A74812</p>
2087	HNFHY51	899913	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 702 of SEQ ID NO:2087, b is an integer of 15 to 716, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2087, and where b is greater than or equal to a + 14.</p>	<p>Z99396, AW392670, AL038837, AL037051, AL036725, AL036418, AA631969, AL039074, U46347, AL039085, AL039564, AL036858, AL039156, AL039108, AL038509, AL039109, AL039128, AL036924, AW384394, AL119484, AW363220, AL037094, AL039659, AL038531, AL036196, AL039625, AL039648, AL045337, AW372827, AL036767, AL119457, AL037082, AL043003, AL037526, AL036190, AL119497, AL037639, AL119319, AL039678, AL039629, AL119324, AL039423, AL036238, AL038447, AL039150, AL119439, AL119391, AL119443, U46350, AL040992, AL042909, AL119522, U46351, AL119483, AL119363, AL119355, AL037077, U46341, U46349, AL119341, AL038520, AL119396, AL037726, AL119335, AL119418, AL039410, AL038851, AL039386, AL119496, AL036268, AL037085, AL119444, AL037205, AL134530, AL036998, AL036733, AL037615, AL134519, AL134531, AL119401, AL134132,</p>

2088	HTOHV42	900015	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1410 of SEQ ID NO:2088, b is an integer of 15 to 1424, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2088, and where b is greater than or equal to a + 14.</p>	<p>AL134527, AL134528, AL043147, U46346, AL037178, AL037027, AL042614, AL036679, AL119464, AL134533, AL042544, AL119399, AL042984, AL042965, AL042975, AL042542, AL134538, AL036765, U46345, AL036191, AL042989, AL036719, AL043019, AL042551, AL043029, AL042450, AI142134, AL037021, AL037054, AL036774, AL036836, AL036158, AR066494, AR060234, AR023813, A81671, AR064707, AR069079 AI014506</p>
2089	HWLXO02	900162	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1212 of SEQ ID NO:2089, b is an integer of 15 to 1226, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2089, and where b is greater than or equal to a + 14.</p>	<p>AW373239, AW372628, N27996, AA377857, AA422157, AI808730, AW393029, R73350, AA326416, AW373220, R54681, AI827898, AI825876, AI650385, AI827701, AI888306, R50597, AI934499, AW006103, AI422225, AA524283, AI088893, AI422224, AI217369, AI380811, AI469281, AA494534, AA975272, N21338</p>
2090	HWLKM7 7	900249	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a</p>	<p>AW084558, AW409927, AW304724, AI745388, AW136749, AI979175, AI817727, AW134503, AA593923, AA573915, AI652793, AI675562,</p>

			<p>nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1618 of SEQ ID NO:2090, b is an integer of 15 to 1632, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2090, and where b is greater than or equal to a + 14.</p>	<p>AI683795, AI922809, AI983612, AI984843, AA573905, AI656045, AI983786, AI984139, AI380162, AI361395, AI936791, AI479830, AA588051, AI590585, AI673630, AI347176, AW206967, AW137010, AI288836, AW170399, AI287323, AW271527, AW197398, AW193824, AI380626, AI869939, AI371858, AI650707, AI861931, AI201641, AW050592, R00081, T53389, AA937517, AA552662, AW304869, AI015077, AI309572, AI262657, AI460271, AI932957, AI950720, AI652807, AA327548, R72802, R50426, AI634175, AI089131, AI986002, R47791, AI659375, AI986009, AI880486, AI418738, AI973094, H26655, AI719489, R52030, AA327517, AW272341, AA523545, AW241543, AA936966, AI918271, AI652616, AW197366, H26610, AI968929, D25775, AW087283, AA100205, AI880487, D84239, AC006950, I95742, AI479949</p>
2091	HWMJCJ06	900555	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2415 of SEQ ID NO:2091, b is an integer of 15 to 2429, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2091, and where b is greater than or equal to a + 14.</p>	<p>N52439, N77401, AA585439, AIS25556, AIS35639, AA585434, AA585440, AA585453, AIS25316, Z28355, AI541510, AI546855, AIS25328, AI541374, AI541514, C15189, AI541523, AIS56967, Z30131, AIS26180, AIS46999, AIS25431, AIS25306, AIS41534, AA585101, AL045991, AIS57807, AIS26140, AIS41509, AIS41365, AIS46828, AIS41017, AA585356, AIS57731, AIS26194, C16300, AIS46899, AIS41317, AIS41535, AIS47039, AIS26196, AIS46945, AL044029, AL036500, AL134123, AL043950, AL040252, AIS40967, AIS35660, AIS57799, AIS41508, AIS41307, AIS57262, AIS35813, AIS25653, AL045671, T11028, AL044771, AL049007, AL043468, AL042245, AL046147, AL044015, AL040768, AL044377, AIS36138, AL042700, AL046994, AL042712, AL043201, AL040414, AL040571, AL046097, D61254, AIS57082, AL037341, R29445, AL079876, AIS57787,</p>

	AL043604, AL044583, R28735, AL048647, AL040510, AL040625, AL045817, AL041142, AL041238, AL041133, AL047183, AL040322, AL041131, AL046330, AL041051, AL041292, AL040119, AL047036, AL047170, AL047057, AL047219, AL041227, AL040463, AL039915, AL043612, AL041197, AL040155, AL041346, AL040529, AL041096, AL047012, AL041358, AL041277, AL041163, AL041098, AL040621, AL043538, AL041324, AI526144, AL040464, AL04162, AL041086, AL043496, AL041296, AL041233, AL047593, AL043467, AL041159, AL045725, AL044186, AL041140, AL040193, AL044037, AL040091, AL040128, AL040168, AL040255, AL040285, AL040342, AL040332, AL040617, AL040553, AL045684, AL040745, AL040370, AL043677, AL046442, AL040839, AL041752, AL040149, D57491, AL043775, AL044165, AL043492, AL041602, AL045920, AL041278, AL038838, AL040253, AL044074, AL041635, AL045990, AL040458, AI541205, AL044199, AL044187, AL040090, AL040263, AL040294, AL040329, AL040082, AL044272, AI525320, AL041186, AL040148, AL041730, AL041523, AL043627, AJ239433, AL046392, AL041374, AL040052, AL043845, AL043537, AL039338, AL042135, AL044064, AL039316, AL043923, AL038983, AL043814, AL043848, AL041459, AL043570, AL041577, AL044258, AL044201, AL046850, AL038532, AL037727, T23985, AL040576, AL046914, AI142134, AI546891, AL045753, AL044274, AL079878, AL049018, AI557796, AL040444, AL039744, AL045857, AI546875, AL038822, AI525321, AL046327, AI541013, AL041168, AA585476, AL049069, AL043444, AL041246, AL040472, AI526184, AI557238, AL040238,

AL041955, AL041347, C16305, AI540920, AL038761, AL040075, AA585438, T41289, T23957, AI557084, AI541506, AL080031, AI541345, AL045989, R29177, AI526073, AI557155, AI525203, AI541048, AI526187, AL042096, AI557279, AL037436, AL042346, AL133620, AB033076, AR017907, I13349, A91965, I66495, I66494, I66487, I66498, I66497, I66496, I66486, I66481, A83642, I66488, I66489, A83643, I66485, I66490, I66491, I66492, I66493, A83151, I66482, I66483, I66484, X81969, AR038855, AR062871, A91752, AR008429, A32110, I05488, I61310, A25909, A60961, A60977, AR062872, AR062873, I08196, A20702, A20700, A43189, A43188, A85395, A85476, A68112, A68104, A06419, A21892, A23997, A68114, A89633, A89634, AR067731, AR037157, AR054109, A21895, AR067732, AR028564, A05160, A08030, A20502, AR027319, A86792, A58522, A91751, AR027318, A58524, A47368, A84772, I19516, A58523, I19517, A76773, A84776, A22413, A84773, A84775, A64973, A84774, A29109, A32111, I63560, AR009152, AR009151, I63561, I63563, A60985, A60990, A98767, E14304, A60987, I08776, I15353, A81878, A93963, A93964, I25027, I26929, I44515, AR002333, I26928, I26930, I26927, I44516, I18895, E16678, I25041, A38214, I56772, I95540, A95096, A95106, A95105, I44681, AJ244004, AJ244005, AF082186, A92133, AJ244003, A91750, I07249, AR068508, AR068510, AR068509, A63954, I91969, I58322, I58323, AR003585, A98420, A98423, A98432, A98436, A98417, A98427, I63120, AR038762, I19525, Y16359, AR035975, AR035974, AR035977, AR035976, AR035978, I08051, D78345, A58521, X83865, A91754, AR031374, AR031375, AR020969, A18053, M28262, AJ244007, I15717, I15718, E03627, I49890, I48927, A02712, I84553, A95051, I84554,				
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2092	HCRPZ48	900696	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 888 of SEQ ID NO:2092, b is an integer of 15 to 902, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2092, and where b is greater than or equal to a + 14.</p>	<p>A18050, A23334, A75888, I70384, A60111, A23633, AR007512, I08396, A60212, A60209, A60210, I00682, A60211, A11623, E00609, A11624, E13740, A11178, E01007, A10361, A93016, A35536, A35537, A02135, A04663, A02136, A04664, I08395, I06859, AR043601, A11245, A77094, A77095, E12584, U94592, I03331, A02710, E12615, AR035193, A07700, A13392, A13393, AR031488, I13521, I52048, A27396, AR027100, I44531, I28266, I21869, A70040, A82653, E16636, A62298, I62368, A24783, A24782, A95117, A90655, AF149828, A92666, A92668, A92667, A92665, I01995, AR031566, I60241, I60242, AR038066, A20699, E00696, E00697, E03813, AR027099, Y09813, AR051652, AR051651, A49700, Z32836, A62300, AJ230935, D50010, AJ230902, I05558, AA247997</p> <p>Z99396, AL038837, AL037051, AL036725, AW392670, AL036418, AA631969, AL039074, AL036858, AL036924, AW384394, AL039564, AL039085, AL038509, AL039156, AL039108, AL039109, AL039128, AW363220, AL119497, AW372827, AL037094, AL119457, AL039659, AL038531, AL036196, U46347, AL119319, AL036190, AL119324, AL119391, AL037639, AL119484, AL039625, AL039648, AL045337, AL036767, AL037082, AL119443, U46350, AL037526, AL119522, U46351, AL119483, AL039678, AL039629, AL119363, AL119355, AL039423, AL036238, U46341, AL119335, AL038447, AL039150, U46349, AL119341, AL040992, AL042909, AL119396, AL119418, AL134531, AL039386, AL037077, AL119496, AL119439, AL036268, AL134533, AL042984, AL037085, AL038520, AL119444, AL037205, AL037726, AL134528, AL036998, AL043003, AL036733, AL039410, AL037615, AL038851, AL119401, AL134527, U46346, AL042614, AL037027, AL119399,</p>
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2093	HCRMU04	900777	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1801 of SEQ ID NO:2093, b is an integer of 15 to 1815, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2093, and where b is greater than or equal to a + 14.</p>	<p>AL037178, AL042965, AL042975, AL042542, AL134538, U46345, AL036679, AL042989, AL042544, AL036719, AL043019, AL042551, AL036191, AL043029, AL042450, AI142134, AL036765, AL037054, AI119464, AL036774, AL037021, AL036836, AL036999, AL036886, AL036158, AR066494, AR060234, AR023813, A81671, AR064707, AR069079, AB026436, AR054110</p>
2094	HHBEA82	900784	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by</p>	<p>AA258714, AA258479, AW372226, AA625114, AI337232, AW372227, AI739102, AA505288, AI418892, AA551238, AA853934, AI936957, R52096, AA481002, R46499, AW166753, AA770298, AW071542, H17104, AI582908, AW007814, AI086723, AI338746, AI340064, AI094613, AI096869, AI922132, AI357394, AI423481, AW087313, AI421759, AI356823, AA287330, N94480, AA524286, AW005778, AI922862, AW191028, AI566341, AA470698, AI421557, AI361016, AI359797, AI362874, AI863909, AI880712, F09352, AI922424, AA873767, AA481480, AA291405, N20109, AI263664, AA570059, AI913894, W94068, AI381877, AI193950, AI364237, D54296, AI539565, AA789159, AA853935, AA482101, AI360188, Z40719, AA400811, AI214242, AA629142, AA095376, T58139, AI034063, N31573, AI040574, H43298, AA953460, AW131152, AI146352, AW054979, AI648405, AA921717, AW375413, AI445988, AI888216, AI083784, AW136876, AA421021, AI271977, R22588, AI360977, AW188664, AI085523, AI613427, AW057831, AA679957, AA524336, M79269, AI598125, AI620319, H65453, AI078721, F30056, AA701072, W23927, W94067, W22794, AW265783, AA480986, D87444, AL049539</p>
2094	HHBEA82	900784	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by</p>	<p>T27258, AI634860, AI767588, AA894544, AI991689, AA404730, AI635347, AA195244, AA411217, AW236952, AW293268, AI640606, AW072654, AI633129, AI360887, AW274499, AI096717,</p>

			<p>the general formula of a-b, where a is any integer between 1 to 5445 of SEQ ID NO:2094, b is an integer of 15 to 5459, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2094, and where b is greater than or equal to a + 14.</p>	<p>AW081124, AI373594, AW117198, AI424073, AA404665, AA236948, AW274623, AI471566, AI041076, AA742216, AA977785, AI979247, AW073726, AA436906, AI129863, AI359758, N24934, AA491080, AA971157, AI081860, AA490894, AI135446, AI077569, N32934, AI167862, AI623813, AA746317, AI581166, AA804498, H28620, AA293454, AA906102, AA293745, T27536, N29816, AA640194, H97513, W73436, AI359073, L44338, AI040170, AA931607, AW079283, AI018416, AA235854, AA386013, AA307874, H94085, AA782504, AA742947, W37849, W69386, AA604174, AI540240, AA805133, AI695574, AI537063, AI337935, AA411218, AI371459, W73359, AI422480, W74279, R50230, R07065, R31685, H94073, AA731784, AA434174, AI357532, AI687230, T27535, AA579916, AA588389, AW103819, W69387, AA101857, AI873792, AI951278, AA577407, AI701686, Z22014, Z98524, H83873, C00310, R50175, Z24849, AA152394, AI244588, AA904357, R67423, AA761110, AA860891, AA935867, AI126673, N30780, F00170, D29461, AA377229, AI932570, AA397568, AA399529, AA730516, N99583, AA679080, AI382296, AA374839, Z98525, AI362551, AI913234, AI741350, AI920850, AI018184, AA702114, R81654, D29114, AA152500, AA148355, H94072, N41550, W37848, AF106037, AF222340, AF183569, AB011097</p>
2095	HWHGX93	900838	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2071 of SEQ ID NO:2095, b is an integer of 15 to 2085, where both a and b correspond to the positions of</p>	<p>AI922425, AW190231, AW003584, AA528226, AI815200, AW006766, AW385445, AW190883, AI337868, AI983250, AW262130, AW337212, AW305087, AI587497, AI826854, AI640371, AI218233, AI337958, AW373439, N93894, AW000789, AA927991, AA071469, AW373440, AA513750, AI688284, AI696797, AA922948, AA857092, AI246042, AI920995, AI624419, W92531, AI491929, AI828286, AI379231, AI091871, AI584063, W72225,</p>

			<p>nucleotide residues shown in SEQ ID NO:2095, and where b is greater than or equal to a + 14.</p> <p>AW204980, AI1818524, AI378538, AI280799, AI674870, AA449300, AI25019, AA431859, AI608680, AI435229, AI627567, AI587133, AI445568, AI354309, AW305146, AI587049, AW338230, AW440094, AI084022, AA449749, AA431858, AI366084, AA505877, W77968, AI911667, AW130716, N64004, AA976403, AW337258, N32415, AA449032, AW136886, AI124030, AA528219, AI453434, AW193263, AI431982, AI631423, AI952361, AI223458, F37472, AI401365, AI290429, AW132036, AA429960, AI333455, AW058441, AA024772, AI950830, AW276587, AI357328, AI587493, AA295018, AI220027, AI360535, AW338970, H87071, AI453327, AW263304, AW044542, AW006613, AI950575, AW316754, AW304759, H16121, AI252225, AA705737, AA024771, AA335712, AI580689, AA295688, N32424, AI583059, H44092, D62000, N56835, AA602994, D79675, AI537354, D62999, AA347786, D62623, AW263293, D62595, AA330758, H15818, D62097, D62477, H14917, AW380238, D62131, D79867, AA371169, AA834426, AA339113, AW263466, D62031, AI536580, AW292336, AW198171, AW192650, D79597, AA176165, AI932668, AI432477, AI802265, D61938, AI280000, AA705749, AI699012, D63012, D62525, AA642685, D61902, AW262566, AA082155, AA297695, C16543, H14624, C16137, AI686490, D62783, H87723, AI624168, AI949192, AA297550, C02046, AA095691, H29095, AA093657, AW385441, H28991, N56478, D61986, AI921253, AW029179, D79835, AA329099, AW089105, N83254, AA295743, AI648663, AW021588, AW161579, AI608936, AI637584, AI498067, AW301409, AL039086, AL121496, AI281772, AW169671, AI811344, AW081255, AW198090, AW059713, AI362637, AL045266, AI476046, AW088134, AI933589, AW190042, AI922676, AW088903,</p>
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AI921248, AI289629, AI633125, AI468872, AI539771, AI699011, AI538829, AI499285, AW302988, AW103371, AW073994, AI537677, AI909697, AI269862, AI868831, AI9222901, AI537273, AI889376, AI524671, AI884469, AI874166, AI670009, AI802542, AI796743, AW081298, AI783504, AW268122, AI625701, U88567, AF017989, E16093, D50462, AF017986, I48979, I48978, AL049452, I89947, AF113013, I33392, AF090934, AL137463, A08916, A08913, AF090901, AL133093, A08910, AL133080, A77033, A77035, AF183393, AL122050, AL133075, A08909, I89931, I49625, Z82022, AL117435, AF113019, AL080137, AL050149, AJ238278, AF104032, Y11587, AL122093, AL050138, AF106862, U91329, AF017437, AF113677, Y16645, AL137557, AF017152, AF177401, AL050393, AL049300, E07108, AL049382, AL137459, AF125949, AL110225, A65341, AL137271, AL117460, AF090903, AL080124, AF078844, AF118094, AL133640, AL110221, A12297, X65873, AL122121, AL137550, S78214, AL110196, AL117583, AL133557, AF079765, AL137527, X98834, A93016, AR011880, AL049938, Y11254, AL133560, S68736, AB019565, A03736, AF113694, AF113691, AF153205, AL049466, AJ000937, AF113699, X84990, AF090900, AF146568, AL080060, I03321, AF091084, X82434, AJ242859, AL050024, AF118070, AL049430, E02349, AF111851, AL122098, AL117457, AL050116, AL133016, AF125948, AL050108, AF090896, U72620, U00763, AL080127, X72889, U35846, A58524, A58523, E03348, AF158248, AL050277, AL137538, AL117394, AF113690, AL049464, U80742, A08912, AF113689, AF118064, AR059958, AF113676, AL133565, X63574, AL122123, AF090943, AL049283, AL049314, AL117585, L31396, AL096744, AL050146, U42766, AL133606, L31397, X96540, AL122110, E07361,				
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2096	HTNA180	900919	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1767 of SEQ ID NO:2096, b is an integer of 15 to 1781, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2096, and where b is greater than or equal to a + 14.</p>	<p>I42402, X93495, AF057996, AL080159, AF087943, X70685, AL133113, AF067728, U67958, AF119337, I09360, I26207, AL133072, AL137283, AL110197, AL137648, AL133077, E15569, AF061943, AL137521, AJ012755, A93350, AL137560, Y14314, AL137294, AF026816, AL133104, AL133014, AR000496, U39656, AL137556, I00734, E00617, E00717, E00778, AL137480, AL122049, E08263, E08264, AF026124, AF111112, A45787, AL050172, AL133568, AF106827, AF111849, S61953, AL137523, U58996, AF003737, AL133067, Z72491, AF000145, AF185576, AL110280, AR038969, I17767, U96683, I09499, AL117440, AR038854, E05822, AL080074, Y09972, AL137476, I41145, AF162270, AL137526, E06743, U68387, U49908, AL122118, AJ006417, AF057300, AF057299, AF079763, A07647, L19437, L30117, M30514, AL133098, AL122111, E08631, Y07905, AF008439, E04233, AF210052, X87582, X62580, AF081197, A90832, AF106657</p> <p>AA910946, AW370766, AA773478, A1147187, AI627563, AW245820, AW084163, AA827996, AI654448, AI445660, AI925490, AW370781, AI261225, AA444056, AI860488, AI339998, AA662124, AA826649, AA916472, AW206617, AI082028, AW293553, AA588398, AA781244, AA100487, AA444074, AA662089, AW363526, AW169569, AI619549, AI272817, AA099576, AA626735, AI476556, AA563618, AW005594, AI669785, AI694033, AW370776, AA100486, AA130971, W31417, AA838073, AA826578, AI869910, AI694055, AW128848, AI285208, AI813824, AI700255, AA548132, AW374533, AA983604, AW245780, AI688313, AA102239, AW374457, AA337602, W04536, AA774600, AA384358, R00451, W92449, AA336823, W92448, AI401368, AW087441, AI269310, C06239, AA130960, AI991651, AA016201,</p>
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	M85399, R00450, AI625478, T04952, AI654393, AW438953, D30892, AA954856, AW374478, AI804856, AA100202, AI272981, AW439050, AW374583, AA927954, AW374501, AW374602, AI934259, AW051233, AW152182, AI345347, AW027904, AW169624, AW050578, AW020419, AI554827, AI612750, AI915291, AI872555, AI678395, AI670767, AI866082, AL119828, AI827154, AI673785, AW059828, AI538850, AI500061, AI890907, AI689388, AW189415, AL037454, AL047344, AI884318, AA928539, AA620560, AW088697, AA502794, AI345608, AW117919, AI538885, AW088628, AI521799, AW020693, AI357940, AI340603, AI540759, AI345396, AI345471, AI538055, AI628833, AI251221, AL039086, AI249257, AA420722, AI345745, AI287477, AI540674, AI446373, AL038605, AI570912, AI284131, AI824576, AI690748, AI866573, AA176980, AI784219, AI242248, AI340519, AI355779, AI334714, AI434453, AI926669, AI922215, AI133559, AI783498, AI648436, AW161579, AI335363, AA808311, AI281888, AI284517, AI923989, AI697306, AI701885, AI348847, AI860027, AI553645, AI340627, AI889372, AW090013, AI872423, AW238688, AI623941, AI494201, AI345527, AI348854, AI473536, AI584153, AI340511, AI799195, AW151766, AI698391, AI800370, AW022699, AI554343, AI311892, AI475139, AI434464, AW162194, AI280655, AI345415, AW020095, AW074869, AI889189, AW022102, AA641818, AI868204, AA848053, AI633125, AI344935, AI624529, AW080079, AI538564, AI554245, AI579991, AL046200, AL046466, AW163834, AI859464, AI620859, AF020797, AF067146, Z83841, I48978, A93350, I89947,

	A08913, A08912, AF177401, AL133113, A57389, AJ012755, AF111112, AL137271, A08910, Y14314, X81464, A08909, A08908, X83508, I03321, AR011880, AF132676, AL117394, AR038854, AF061836, AF100931, L13297, AL133075, Y09972, A08916, I89931, AL133557, AB007812, AL117457, X60786, I49625, A08907, AL133093, AL137550, AL133560, A18777, AF113694, AF067728, AL137478, U55017, AL133080, AL049314, E02349, E06743, U49434, AL137574, X84990, I09499, AL133565, AL133031, AF081197, AF081195, Y11254, AL110225, AL117432, I89934, A21103, I48979, AL050277, U95114, AL136842, AL137275, D16301, AL050092, S76508, AL122123, AF031903, AF126247, I33392, AL133640, AL117416, AF153205, AF111849, X67688, AF026124, AL122118, E02221, E01614, E13364, AF032666, S68736, I46765, AL133054, AJ000937, A77033, A77035, AF112208, A49139, AF185576, U42766, X98834, A08911, AF077349, AL137539, AR013797, E03348, AF090934, AL049283, AL049430, AR038969, A76335, AL117626, AF118090, AL117583, AL137459, AF080622, AL122100, AF090900, S77771, U78525, AF090901, AL122121, AL133112, I89944, X63410, AL133067, AF028823, AL133558, E05822, AL080159, D89079, U58996, AF079763, AF061981, AL137294, U35846, AL133665, AF067790, AF017437, AL137526, AF054599, X87582, AL110196, AF087943, X83544, AL122106, AF111851, AL137538, AL117649, AF090903, A07647, AL050116, AL023657, AL137533, AL080140, AL137656, AL133568, U88966, U00763, AR000496, U39656, A91160, AL050149, AF146568, AL137273, AL133606, AL137521, A91162, AC006840, AF162270, I41145, E00617, E00717, E00778, AF113677, AF176651, U87620, E08631, AF090896, AL133072, M79462, I68732, E12747, AL049465, AL122110, A18788, AL137429, AF113690, X82434,



				<p>AF114170, AL122049, I09360, A65341, AL050024, AF113699, X80340, AR029490, AL133081, Z82022, AL133098, AL117460, AL117585, AL080158, X92070, AL117578, AL137712, AF026008, AL133077, AL050155, AF106657, Y07905, AF139986, AL050393, AL117435, AL137292, AJ005690, AF008439, X72889, D83032, S78214, E07361, S61953, Y10080, S83456, AL137283, AF097996, Y11587, AF106827, E12580, AL050278, I17767, AL049466, A08915, L31396, AL049452, AL050146, A03736, L31397, AL137267, AR068753, AF026816, AF119337, AF091084, AF003737, AF113019, AF113689, L19437, AF090943, U67958, X06146</p>
2097	HCRPO45	900966	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 3081 of SEQ ID NO:2097, b is an integer of 15 to 3095, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2097, and where b is greater than or equal to a + 14.</p>	<p>AL110406, AL042617, AI207822, AI921758, AW103491, AI951947, AW245787, AW151593, AI494358, AI262716, AW245429, AW341614, AW378336, AA894688, AI801517, AI076235, AI828126, AA904279, AI675937, AI460342, AI128285, AW294715, AI745086, AI077325, AL042068, AA115771, AI624138, AI082386, AA459947, AW167502, AI540099, AI635602, AI364603, W67744, AW341954, AW078482, AI434372, AI953308, AW261951, AW005837, AI633304, AI623521, AI057179, AI368673, AA004519, AW168441, AA552497, AI591419, AI564983, AA974973, N23827, AI692827, AA627254, AA448321, AA314542, AW080692, AI205001, AI368672, AI872494, AW074327, AI872477, AI758700, AI680387, AI334786, AA641824, H14234, AW051418, W67145, AI493453, AI184117, AI378974, AA377758, AI720317, AW082444, AI363715, AA074282, N25080, AW190481, AI439839, AI032415, AA552221, AI825222, AI473352, AW378284, AI198651, AI432602, H65846, AA729339, AI784394, W32168, F28183, AW370330, AI870988, H69297, H28474, R54785, AI356300, H58452, AA113878, AA868529,</p>

				AA470038, AA115770, D54636, AW263948, W92582, AI866290, H69392, C17841, C17347, AA934363, AA416938, R54975, AI669735, AI690365, AA343797, AA400959, W32110, AI270015, AI859811, AW393711, H61829, AA968922, AI351193, AI911491, AA814464, AA291849, H58453, AA421734, AA434017, AI000272, AA322101, N87914, AA477387, AA994996, AW241334, AW090284, AA296340, AA400890, AA291727, AA411311, AI669906, T29492, AA477140, AA291696, AI561336, W92583, AW378332, AA004602, H61828, AA907778, AA614865, AI933538, AA904512, AW378303, AI279499, AW372174, AI560558, C17284, H49899, N83492, AA587988, AI684276, H65933, AA581394, R62494, AI696415, AI299631, AW378274, H39968, AA460036, AA641823, AI964054, D20567, AW370328, AI479661, AW237023, AL117507, M22636, X04654, X07401, AL117399, X84841, M57939, X06815, X06814, M57937, X06812, X06816, X17453, X06811, M57936, X07402, X07403, X06819, X17451, AA456813
2098	HWLWF60	900991	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1400 of SEQ ID NO:2098, b is an integer of 15 to 1414, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2098, and where b is greater than or equal to a + 14.</p>	AW368386, AW238539, AA029705, AI831658, AA307163, AI880448, AI828080, AI809445, AI749767, AW392516, AI719057, AA216597, AI924141, AI753535, AA425993, AA405599, AW189150, AA405525, AA293346, AL038035, AA706635, AI831455, AA126431, AA570492, AW148955, AW102926, AI609085, AW072010, AI951355, AA449167, AI189194, AI828698, AI014547, AW168852, AI148422, AA305104, AI147540, AI499218, AA431664, AI625708, AI565713, AI148267, AW118509, AA315632, AA745627, AA826234, AI144475, AW169850, AW304105, AA425864, AI075654, AI018481, AI339069, AI023124, AA457092, AA577508, AW050921, AA602566, AA431311, AA633001, AA229090, W00840, AI199803, AA405536, W45253,

AI269467, AA630008, AI066482, N98500, AI167735, AA854101, W69773, W80519, AA926675, AA643707, AA563837, AA476496, AW372478, AA305369, AI961469, AI271734, AA668561, AI128691, AI744974, AA130762, AA910180, AW392522, AI065149, N25901, W31066, W80520, AW372358, AA405545, AI148336, AI597627, AA312742, AW404947, AA877983, N30924, N62547, AA570576, AI077917, AI017451, AA399426, AI832854, W42994, AA053466, T29753, AA253057, H73254, AA253113, W69812, N20887, AI832728, AI867470, H90836, N47983, AI749221, R71367, AA618597, AI831831, AA207047, AI332369, AI122584, AA868214, AI024184, AA661572, AI090382, AA828075, AA902522, T09075, AA507590, AI038034, AI873238, R94441, AA456122, H94762, H90175, AA291363, AA079386, AI370481, AW235530, AA551702, R75921, AI199826, AI470704, R16572, AI337531, AA542942, AA229089, AA954559, AA425960, R49107, AA300025, AA434489, AI470710, AA502581, R36025, AA434394, AW383377, AA464298, H74177, AI085238, C03394, AA454676, T35432, AA216663, AA427687, T35371, AI148635, AA309695, AA853985, H94767, AI189496, H42261, AA706062, H04146, AA333748, H94732, T35471, N75087, N69495, W22599, AI084540, N55794, H94735, AA352774, AA327217, AA904802, AW391877, H42193, AA403284, AA570044, AA365296, R71368, AW367180, AA207046, H04145, AW195997, AA866125, AW054856, AI041636, AA364530, AA505415, AA628797, AA079385, AI240316, R11219, AI241103, AW389429, AW440462, AA299828, N51187, AA426256, AA977681, AA303937, AA357438, R26412, N52317, N79215, AA654730, AA654815, AA429043, T32469, AA164587, AA658950, AA907646, AA300026, AA296444, N90989, AI952123, AA523768, R16631, R11277, AA428055, AI768287, H24905, AW367183,				
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AA844041, AA527916, AI783869, Z46157, AA126575, AA532371, AA578044, AA427432, AF077030, AF151812, AF091085, M30773, AL137521, X63410, I48978, X66871, AL117460, U75932, AR068753, AL049382, AL137548, AL137476, A15345, U58996, AL080126, A08910, AF115410, A08909, AB016226, A08908, AF100931, E05822, AF039138, AF039137, L13297, AL137560, AL023657, AL137550, I89947, A08907, M30514, A08913, AR038854, AF113677, AF112208, A08912, A08911, AF126247, A77033, A77035, X06146, AF017790, AF047716, AF091084, AF090934, AL122049, AF090943, AF118092, I17544, AB007812, AL137529, AF125948, S76508, AL137537, AL133558, AL133081, U53505, AF159615, AL137554, AL110225, E01614, E13364, AF057300, AF057299, I68732, AF113691, AR020905, AL137271, U42766, X70514, AL110221, AL133623, I89931, AL137557, E15324, S77771, AL049452, AF031147, AJ005690, I49625, U54559, AL137429, AL137657, AL133637, A07588, E02349, AF079763, U55017, X67688, AF106697, AF026124, AF058921, AL137533, AL117435, U49908, I48979, A70386, E02152, AL137292, A18777, AF017437, AF145233, AJ238278, M96857, AL122093, X67813, AL050393, AL080163, I89934, I29004, AL080124, AF113690, AL133067, AL109672, A65341, X80340, U67328, AL137281, AL117457, AF036268, A03736, AL137479, A17115, A18079, AL136884, AL049996, Y10080, AF038847, Z13966, X84990, AL122100, E06743, I32738, X63574, M92439, AF061795, E01573, E02319, AF151685, AL133010, AF013214, AF013249, AF111851, AF210052, E12580, AF076633, AF200464, A91160, AL133016, E01963, U49434, AL080074, AL080148, A91162, AF061943, AL137300, A21103, L04849, AL122110, AR013797, X82434, AR034830, I96214, Y16645, AL049300, S36676, A08916,				
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2099	HCNCY58	900993	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2157 of SEQ ID NO:2099, b is an integer of 15 to 2171, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2099, and where b is greater than or equal to a + 14.</p>	AL080159, AR029490, AF115392, AF176651, M85165, AL137459, Z37987, AL137711, AL133075, AL137558, AL049466, AF199027, U62966, AF177401, AL096728, AL137488, AL050155, AF030513, X83508, AF055917, X66417, AL049324, AF107847, A07647, L31396, AF090896, AR034821, L31397, AB029066, AL137716, U67813, AF106945, X76228, AF067728, AJ000937, AL133080, AR009628, AL137530, AF111849, X59812, AF094480, AL080234, AL133557, AL137254, AF137367, AF114168, M80340, AC004200, A08456, A57389, AL137526, S63521, AL117463, AL050277, AL049426, AL050172, AR038969, X92070, AR060156, AF090886, AF061981, AR068466, Y07905, Z97214, AL050366, AR011880, I89944, AR022283, AC006197, I00734, AF026816, S75997, AF117959, X00474, AF028823, AF082526, Y10823, X79812, AL122050, AL133640, AF118090, AA053235, AA613827, AA918028, AA654613, AA411037, AI038134, D11685 AI732436, AA579242, AI954628, AI763064, AA053424, AI493412, AW134526, AA534814, AI967966, AA053043, AI992267, AI342785, AI304542, AI913775, AI864467, AI733752, AW376406, AL134524, AI142134, AL038983, AL037727, AL039643, AL041347, AL039432, AL037443, AL037343, AL037335, AL037436, AL037323, AL049018, AL038838, AL041238, AL047012, AL044125, AL047170, AL040463, AL047219, AL044162, AL040193, AL040621, AL043538, AL047183, AL043496, AL040464, AL041324, AL045817, AL041098, AL040119, AL037435, AL041133, AL044186, AL041096, AL038822, AL040625, AL038532, AL040322, AL041163, AL038761, AL047057, AL040617, AL040510, AL040075, AL044037, AL040149, AL041358, AL041296, AL043467, AL041346, AL041086, AL045684, AL041246, AL041197,
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	AL041752, AL040576, AL043923, AL043814, AL043677, AL041635, AL040839, AL043845, AL041233, AL040294, AL045753, AL043492, AL041602, AL040553, AL046442, AL044064, AL041459, AL044074, AL040472, AL041577, AL040444, AL041292, AL040052, AL041730, AL041523, AL043627, AL041277, AL041159, AL041374, AL041955, AL046850, AL040768, AL040155, AL043848, AL043570, AL042135, AL046994, AL046914, AL045328, AL041142, AL039316, AL046392, AL044272, AL045671, AL041168, AA327091, AL045920, AL040529, AL046330, AL045989, AL042096, AL044258, AL047036, AL040332, AL040148, AL040458, AL044187, AL045990, AL040128, AL040745, AL040370, AL044199, AL040342, AL039360, AL079878, AL040571, AL039338, AL037341, AL044274, AL040285, AL041131, AL039744, AL041186, AL040091, AL042898, AL041051, AL044165, AL043941, AL040414, AL043444, AL040090, AL040168, AL041140, AL046327, AL079852, AL043775, AL041227, AL044201, AL037295, AL040253, AL040082, AL045857, AL038745, AL040329, AL045725, AL041278, AL040263, AL040255, AL134110, AL039915, AL043612, AL040238, AL044529, AW339763, AI525306, AL037279, AL049069, AL045327, Z99396, AL047163, AI557262, T11028, AI541535, AI547295, AI557799, AL041344, AI526194, AL041210, AL038837, AA174170, AL037051, AL036725, AL045211, AI557796, AA585101, AA631969, AL039074, D61254, AI526144, C16300, AL039085, AI541390, AL039564, AL039156, AL040385, AL039108, AL039109, AL039128, C15189, AI535660, AL039659, Z28355, AL037526, AL038531, AL047037, AL042909, AL038651, AI541307, T23957, AI541013,

	AL039625, AL039648, AI557807, AL045337, AL036924, AI526140, D29033, AL037094, T23888, AL039678, AL039629, AL039150, AL039423, AF147790, AR064707, AR066494, I18895, AJ230935, AJ230902, AJ244007, I05558, AR023813, I08396, X07299, AJ238010, I48927, AR062871, AJ230951, A95051, Z32836, I84553, A92133, I84554, M28262, A02712, A18053, I06859, A23334, A75888, I70384, AR043601, A60111, A23633, A18050, I60241, I60242, AR017907, I66498, I66497, I66496, AR062872, AR007512, I66486, A84772, AR062873, A84776, A84773, A84775, A84774, AR067731, AR067732, A58522, A91750, I15718, AF149828, A60212, A60209, A60210, A60211, A02710, E12615, AR035193, A07700, A13392, A13393, A43189, A43188, E13740, AR027100, I28266, I21869, I13349, A22738, A20702, A10361, AJ231009, A20700, AR060234, AJ230867, I15717, A35536, A35537, AR038762, A11245, A02135, A04663, A02136, A04664, Y16359, D78345, I08395, A58524, I08389, A58523, I62368, AR031566, A85395, A85476, E03627, I66495, I66494, AJ244003, AJ244004, AJ244005, I66487, A90655, A93016, I44681, I03331, I00682, I08051, AJ230972, X83865, A86792, AF082186, A98767, A20699, E14304, A77094, A77095, A11623, E00609, A11624, E00696, AR031488, I13521, E00697, A81878, I52048, A93963, A93964, A27396, I63120, A95117, I49890, I44531, A11178, E01007, AR037157, AR054109, A64973, E03813, A25909, A91965, A24783, I44516, A24782, A70040, I66482, AR009151, I66485, I66483, I66484, E16678, A82653, AR038066, AR027099, E16636, AR051652, Y09813, AR038855, AR051651, E12584, AR064706, U94592, D17247, A93923, Y11449, I01995, AR008429, A93916, Y11447, I25027, I25929,

2100	HCNDA61	901111	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1172 of SEQ ID NO:2100, b is an integer of 15 to 1186, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2100, and where b is greater than or equal to a + 14.</p>	<p>I44515, I26928, A98420, A98423, I26930, I26927, A98432, A98436, A98417, A98427, AJ231028, AR022273, A81671, AR069079, AR051957, D50010, AB025273, D13316, A70869, A93931, A70872, X81969, Y11458, A22734, E17098, AB026436, A85203, AL133053, AL122101, I19525, AL133074, AR054110, A06631, AJ230845</p> <p>AI799005, AI478852, AI825946, AW205093, AA639927, AI684054, AA634246, AA630382, AI193494, AI873043, T94447, AA573526, AI566445, T98050, AW294597, T98141, T94534, AI940596, AI940601, AI922766, AA931283, T24595, AI623271, AA648186, AI023258, AW369427, AW176607, AI971154, AI888177, AA992910, AF061022, AF061024</p>
2101	HCNUB65	901125	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 3095 of SEQ ID NO:2101, b is an integer of 15 to 3109, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2101, and where b is greater than or equal to a + 14.</p>	<p>AW009763, AI660234, AI660957, AW361534, AW361532, AW361521, AI802756, AW361520, AI802693, AW361523, AA508854, AI721275, AA581198, AW361522, AW009764, AI687981, AW361528, AA296955, AI721121, AA297150, D25727, AI582072, AA305409, AA514186, D80166, D58246, C14014, AI535686, D80439, D81026, D51221, D51060, H67854, D80022, D81030, D81111, D80133, D80157, D80212, D59619, D80210, D80240, D80219, D80064, D57483, H67866, D59859, D59551, D80196, C14227, D80391, D59787, D80251, D51799, D80164, D80024, D80268, D80366, D59889, D80188, D51423, D59317, D80253, C14389, Z21582, C14973, D59653, D80227, C15076, AA809122, F13647, D80247, C03092, D80258, C06015, D59610, D80195, D59474, T11417, D58283, D59503, D59275, D80248, D80045, D50979, D59502, D80269, C14331, D80014.</p>



			AA305578, D59467, D51022, D80038, D80043, D50995, C16955, AI525912, D51759, D80302, D58101, D80522, C05695, C14957, D59927, T03116, D45260, C14046, C14344, D80241, C14407, D80193, AI525920, D51103, D59627, AI525235, AA514188, D80168, D60010, AI525215, AI525917, AI525923, D59373, D80378, D45273, Z30160, C14298, AI525242, Z33452, T02974, AI525222, C75259, AA514184, D51053, D80949, AI557774, C05763, AI557751, AI525227, D51213, D59695, D51079, T02868, H67858, AW369651, C13958, D52291, C14077, AI525237, D31458, AI525925, AI525216, AI525238, D50981, D80228, N66429, AI525219, AI525228, T03048, AI525239, AI525969, AI525907, AI525908, AI525903, AF127036, AF039400, AB017156, AF095584, I95746, AF039401, A62300, A62298, AR060385, AR008277, AF008281, AR018138, AR008278, I14842, AB028859, AJ132110, AB002449, A82595, A84916, AR054175, AF058696, I79511, X64588, X67155, X68127, AR016691, AR016690, U46128
2102	HWLRB02	901128	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1424 of SEQ ID NO:2102, b is an integer of 15 to 1438, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2102, and where b is greater than or equal to a + 14.</p>

	AW084068, AL042787, AI432657, AI432657, AL042515, AI431247, AI431354, AL043295, U46344, AL045328, AL040207, AL042488, AC022517, AC003983, AL122126, AC007284, AL135922, AC004943, AC004147, AC009263, AC006270, AL049777, AC004253, AL035687, AL096707, AC004617, U52112, AF001905, AC005005, AC005004, Z72519, AC007876, AC005548, AC004843, AC008080, AC007649, AC005821, AF029308, AC004986, AC004831, Z97353, AF042484, AL020997, AL035653, AC006397, AP000500, AP000952, AC005544, AC005411, AC002525, AC002523, AL031274, AL049589, AL117667, AL031120, AP001063, AB008681, Z84814, AC008170, AC006238, AP000968, AC006212, AC005632, AF165176, Z95704, AL031388, AC007021, AP000475, AC006383, AL049797, AC004972, AL022400, AC003087, AF064863, AC006464, AL034371, AC004478, AL080239, AC005915, AC000119, AC004019, AC005220, AF001550, AL035467, AC005349, AC006840, AL031668, AL079352, AL023775, AC005951, AL031230, AC007156, AC005863, T49155, T49699, R07004, R40742, R40742, H06492, H30564, H40677, H86072, H86543, H86569, N71755, W39372, W86503, W92466, W96135, AA013379, AA016189, AA017476, AA019443, AA021123, AA021310, AA028068, AA031658, AA035574, AA054248, AA059113, AA059194, AA102640, AA135206, AA151930, AA152111, AA156568, AA190486, AA227020, AA227565, AA236317, AA253218, AA256134, AA256047, AA258804, AA258712, AA419606, AA418879, AA430505, AA428585, AA429539, AA492046, AA513740, AA514540, AA548372, AA557441, AA568471, AA602564, AA604253, AA610240, AA568809, AA618500, AA618602, AA639730, AA576999, AA668780, AA729826, AA738262,

2103	HSDKL35	901202	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2429 of SEQ ID NO:2103, b is an integer of 15 to 2443, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2103, and where b is greater than or equal to a + 14.</p>	AA748351, AA769191, AA826910, AA838222, AA856578, AA887478, AA903993, AA923484, AA934762, AA953033, AA973742, AA977546, AI083719, AI095039, N55802, N56369, W29115, AA641436, AA643059, AA170840, AA411709, AA453677, AA479240, AA669335, AA670172, AA447746, AA779698, AA782736, T26327, AA909244, AA968939, Z40403, Z41712, F07314, AI261269, AI273214, AI274001, AI275808, AI280684, AI197914, AI287863, AI289883, AI301333, AI335020, AI335856, AI367668, AI380398, AI347030, AI436465, AI457810, AI417451, AI469090, AI471619, AI492303, AI559582, AI498211, AI498922, AI567950, AI582535, AI423965, AI149145, AI151207, AI627930, AI205031, AI224159, AI537852, AI589440, AI342557, AI609698, AI610646, AI633238, AI636060, AI65999, AI818580, AI635849, AI768065, AI083757, AA581468, AI479682, AW243083, AA054686, H29261, H29344, AA774784, AA788898, AA563853, T61913, T74334, AI744782, T09341, AW058478, AW020551, AI654542, AI741569, AA364806, N46425, T11289, N51579, AI676141, T89040, T61976, AW408761, R17137, AA774891, AI750509, AI762849, AJ245620, AJ245619
2104	HJPCX37	901253	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 2505 of SEQ ID NO:2104, b is an integer of</p>	AL120519, AL120518, AW167654, AI860695, AA878120, AW340140, AA824284, AI829215, AI858970, AI983809, AA723802, AA233673, AI910795, AA527075, AI687053, AI289782, AW195947, AA494414, AI680070, AW132045, AI368513, AW439152, AI688692, AI688681, C00730, AI697102, AW293340, AA524205, AA514491,

2105	HPBEM10	901276	<p>15 to 2519, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2104, and where b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1298 of SEQ ID NO:2105, b is an integer of 15 to 1312, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2105, and where b is greater than or equal to a + 14.</p>	<p>AI337294, AI858216, AI857575, AW022981, AI652837, AC005837, Y11274, A59344, AL122093</p> <p>AA287703, AA287702, AA365652, AA282618, AA927786, AW364617, AA027167, F24601, AI968421, AI913352, AI302397, AI040349, T56496, AA355129, AI984941, AI184494, AA480189, AI128765, AA027168, AA382209, AI935351, AB023172</p>
2106	HWBDL33	901333	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1857 of SEQ ID NO:2106, b is an integer of 15 to 1871, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2106, and where b is greater than or equal to a + 14.</p>	<p>AI263085, AI671224, AI741604, AW055187, H93009, AW057512, AA058688, AI800594, AW195361, AI740946, AW271301, AW292805, AA160279, AI302809, AA160278, AI769897, AI200257, AI628787, AI735273, AI458862, AI091306, AW272744, AI128201, AA716336, AI707638, AA031623, AI307309, N59386, AA421911, AW052091, AA088175, AI824017, AA449402, AA461046, AI635515, AA927750, AI699923, AI880867, AI597746, AA460478, W03796, AI239461, AI863568, AA448335, AA582895, AA449267, AI278475, AI691016, AI758904, H64963, AI278932, AA709030, AI418284, AI361585, AA045175, AA150151, AI634797, AA035209, AA045521, AI933321, H59637, AA035208, AA975342, AA917066, AI261533, AI300367, AI149430, T97469, AA502528, AI199994, AA974453, AA810540, AA411404, AA576365, F20467, AA040431, N47960, AI373386, AI684553, AI962642, AI474422, AW072561, AI824266, R97144, N73170,</p>

2107	H2LBA47	901375	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1295 of SEQ ID NO:2107, b is an integer of 15 to 1309, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2107, and where b is greater than or equal to a + 14.</p>	AA731356, AI806247, T97468, AA502505, H13072, AA099553, H64964, T96890, T96889, R58859, AI161128, AA677863, H95741, AA380214, AA040644, T70436, H94235, AI305839, AA366448, AI743473, AI668883, AA366209, R97096, AA502417, T81549, AA361023, AA045294, AA976534, AA974771, AA465003, AI922795, AA441989, AW148422, AW182457, H13276, AA344621, N77074, AA713812, W01926, AA031704, AI733416, AA736644, AA040430, AA101990, N49171, AA781193, AA382998, AI148352, AW452710, AA152220 AI346914, AW361114, AA573910, AA573949, AA314779, AA573904, AA573811, AA573823, AI791286, AI791498, AA573762, AA308533, AI732541, AA314573, AA315990, AA307789, AA308019, AW362522, AA315862, AI925615, AI802703, AA315993, AA313200, AA316848, AA316249, AA552253, AA316525, AA552098, AI933251, AI926615, AA313549, AA508861, AA316634, AA552332, AA552296, AA314847, AA573769, AI446121, AA315069, AA581222, AW130226, AA552106, AW363214, AA552304, AA551912, AA316658, AA552492, AA574080, AA314181, AA552602, AA307590, AA315842, AA552328, AI888532, AA588112, AI318255, AI318551, AW362532, AI307602, AI452604, AA551820, AA315757, AA313418, AW351498, AW361505, AA584947, U54601, AW130541, AW182560, AA612996, AI691058, AI933755, AA527185, AA588123, AA316515, AI537454, AA581266, AI282560, AA583270, U54606, AA582738, AA535703, AW351551, AI732344, AA837983, AW361468, AI470732, AW044042, AI444965, AI652625, AI926800, AI919553, AW008048, AL036638, N71180, AW020397, N75771, AW020710, AW409775, AI557238, AI932458, AI698391, AW029401, AI818358,
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	AW411235, AL038437, AL037454, AI568060, AW020592, AI627988, AA806719, AI254727, AI590043, AI537677, AW044029, AI525669, AW162194, AI446809, AA580663, AI538885, AI525653, AI866127, AI587121, AW020406, AI559872, AW161579, AI273179, AI589428, AI540674, AI582483, AL119791, AL040207, AI866608, AL045500, AW023863, AL038529, AW189802, AI612885, AI364788, AI572717, AI244136, AI817430, N99088, AW191916, AI539766, AW238730, AW172745, AI620810, AI541027, AL048482, AI866510, AI536912, AI539800, AA809974, AL121365, AW265004, AL121328, AW023338, AI859991, AI624293, AI355779, AW305233, AA983883, AI623941, AA127565, AW021717, AA715307, AI648567, AI541048, AI918449, AI621341, AI950688, AW132107, AA100772, AI680194, AI336575, AI859464, AW082623, AI923989, AI671642, AI494201, AL039390, AI690748, AI866465, AI335208, AW163464, AI874166, AI927755, AI499986, AW020480, AI628325, AI874151, AA911767, AI288285, AW410259, AA641818, AI348854, AI473528, AI366992, AA493647, AI500523, AA853213, AW163834, AI620302, AA904121, AA853539, AL037030, AL121270, AI567944, AL044207, AI002285, AI866469, AI435253, AA420758, AI539781, AI590943, AL039716, AW019988, AI500061, AI491710, AI557426, AI269862, AI521560, AI433157, AI348917, AI919500, AI309306, AI554821, AL045163, AI541056, AL043070, AW151136, AL046944, AI801325, AI569583, AI539771, AI866646, AI619587, AW023351, AW051059, N99092, AI349957, AW051088, AI866820, AI500659, AI889372, AI866461, AI345005, AI815232, AI718513,

AR030933, AR058965, S68736, A91160, A76335, U91329, AL137480, U67958, X72387, AL133606, AF113019, I48978, AF111851, I89947, A08910, A08909, A12297, A93016, X66871, Y10080, A08916, AL137271, AL049464, AL122049, A18777, AR068751, AF090886, AF026124, AF100781, Y11254, AF065135, A08908, AF017790, I92592, A08913, AL117435, AL137523, U87620, A08912, AF106862, AJ005690, AL137557, AF185576, AR038854, AF090934, AL110196, L31396, AL137705, L31397, X63410, AF078844, AL137478, E06743, AL137574, AF061795, AF151685, S76508, U88966, AF120268, AF113676, AJ012755, I89931, AL023657, AL110218, E12747, I89934, AR068753, I49625, A08907, AF111849, Z37987, AL050170, AJ003118, X81464, AF067728, U58996, AL049452, AL117416, AF079763, AF153205, AL137488, AF090901, U35846, AL137476, AL080124, X79812, AL049283, U92068, AF087943, I03321, AL080154, I17544, E01314, AL137711, AL050116, AF177401, AJ010277, S79832, AF106657, AL050092, U42766, AF022363, A77033, A77035, AL110171, I48979, AF118090, AL049314, A90832, AL137529, AL122045, I68732, A15345, AF210052, A83556, AB016226, A65341, AL137640, Z72491, AF118092, AF031147, AF090903, AL137550, U68387, S83440, S7771, AL096751, AL133072, Z97214, AL137479, D83032, AF113677, E07108, AF146568, AF061943, AL122110, AL080074, AF017437, Y11587, AF176651, AL117585, A93350, AL133075, AL117457, AF158248, AL133031, AL137548, AF114170, S36676, A07647, AL133016, D16301, AL117440, AL110225, AR034821, E02221, X63574, I89944, AF111112, AL050277, AL133080, X70685, I09499, AL137558, AF139986, AJ006417, AF081197, AF081195, AR011880, A58524, A58523, A21103, Y10655, AF126247, Y10936, I33392, X80340, E02349, AJ238278, AF094480,				
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2108	HCQA172	901415	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 929 of SEQ ID NO:2108, b is an integer of 15 to 943, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2108, and where b is greater than or equal to a + 14.</p>	<p>AI675865, AI075324, AI815198, AI634717, AI888294, AW151674, AI817063, AW369331, AW194118, AI380637, AI436796, AW166169, AA573742, AW369360, AA909945, AW152548, AW190856, AW364300, AI735767, AI080640, AA582017, AI445913, AA316115, AI678847, AA307697, AI475938, AW364225, AI921153, AA314225, AI888914, AW304001, AI828325, AW272720, AA533047, AA315049, AI559391, AW073291, AI801054, AA776960, AI025266, AA582851, AI800431, AI378681, AI800451, AA838499, AW370283, AA315629, AI720013, AI805627, AA884931, AA307513, AA316874, AI378390, AW027843, AA314372, AA565996, AA437001, AI801784, AI040152, AI249798, AA552670, AA970336, AA316967, AA316233, AA314146, AI275085, AA315724, AI476691, AA307795, AI925030, AW364247, AI537173, AA838482, AI242802, AI277266, AA622524, AI473626, AI291994, AW002338, AI610106, AI184843, AA442829, AI469656, AA426228,</p>



2109	HETHC61	901421	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1363 of SEQ ID NO:2109, b is an integer of 15 to 1377, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2109, and where b is greater than or equal to a + 14.</p>	<p>AI146786, AA315166, AI582452, AI916480, AA593818, AA313235, AA421562, AI285429, AI924498, AA583091, AI358508, AA425142, AI445130, AI888732, AA315613, AA244356, AA632103, AW190915, AA581848, AW152169, AW191880, AI678427, AA565444, AW192785, AI891014, AW370274, AA314206, AA476675, AI473553, AA625485, AA687567, AI675714, AA316508, AI685830, AA314052, AI434099, AA298537, AI469613, AI972701, AI972499, AA526975, AI933636, T86663, AI623264, AA513297, AI581525, AW080588, AA501945, AI400863, AA315408, AA298527, AA639696, AA421527, AA558986, AA570785, AW303846, AI537212, AI926128, AI695291, AI986354, AA055880, AI445127, AW196067, AI580982, AI932444, AI919084, T24475, AI471336, AI783818, AI924494, AA306967, AI867585, T24892, AA506763, AA307841, AF088867, AF038451, AF007791, AF044262, AB016592, AW162943, AI590817, AI492171, AI168081, AA831769, R25716, AA359492, AW238299, R62460, AW379689, C02578, AW241754, AW243207, AI034221</p>
2110	HTXLJ25	901472	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a</p>	<p>AI829099, N25625, AI126506, AI200037, AI128843, N34223, AA743134, AW024969, N36303, AI217597, AA605122, AA729493, AI160533, AW450603, AA568193, AA568681, AW020616, AI695490, N26904, N24885, W52651, AA648514, AA806507, N35103,</p>

2111	HCNAI22	901473	<p>is any integer between 1 to 774 of SEQ ID NO:2110, b is an integer of 15 to 788, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2110, and where b is greater than or equal to a + 14.</p>	<p>N72137, AI802647, AI312534, AA729125, N34254, AI219599, H86994, H86995, N39790, R73200, N25653, AI032141, W00385, AW298649, AA296449, N28403, R73137, N26781, R26304, AW452862, AW453038, AI299683, AA988539, W52017, AI039557, AI141901, AA768761, AW236299, AI361669, AI674252, T25829, AI452444, N20053, AW074182, AI984739, AI805445, AA543074, T25828, AA358828, AA653691, AI362330, AI906328, AL110196, AL050024, E03671</p>
2111	HCNAI22	901473	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1005 of SEQ ID NO:2111, b is an integer of 15 to 1019, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2111, and where b is greater than or equal to a + 14.</p>	<p>AW001287, AW300770, AI691072, AI936111, AA622758, AI245950, AA563933, AA622120, AI801582, AI348065, AA552519, AW001308, AA847242, AA622570, AA552362, AI660557, AW050790, AA582787, AW000826, AA643708, AA298484, AI732367, AA643616, AA514424, AI673534, AA857546, AA025434, AA543029, AI821215, AA470683, AI732198, AA297147, AI582013, AA297176, AA025433, AI749731, AA594300, I95745</p>
2112	HSIAL77	901494	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 961 of SEQ ID NO:2112, b is an integer of 15 to 975, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2112, and where b is greater than or equal to a + 14.</p>	<p>AI685117, AA583424, AA554005, AI718759, AI721245, AI732444, AI832388, AI732445, AI720621, AI720903, AA130541, AI460276, AI990978, AI990957, AA574028, AI879881, AI733759, AA115664, AI832502, AI983398, AI733760, AA580320, AA130579, AA134398, AA126912, AA132736, AI748949, AA308497, AA134332, AA055636, AA133748, AA134372, AA436898, AI708072, AA130459, AA603658, AA134397, AW204007, AA297640, AA102277, AI302569, AA316534, AA130403, AI983618, AA296956, AI380363, AA506416, AI445264, AI688106, AA569104, AA100297, AI963380, AI925567, AW362172, AI672950, AW362167,</p>

	AA298528, AA100290, AA633163, AI832499, AA297149, AA134333, AI707468, AI380043, AA297152, AA574073, AA130530, AA099805, AA297184, AI720152, AI962005, AI832629, AW365047, AA132779, AW029266, AW058268, AI581967, AI582108, AA132843, AW130348, AA298926, AA134251, AA132714, AW376682, AW028870, AI469819, AI880716, AA132909, AA132846, AA134371, AA296954, AA127117, AA297182, AW376616, AA298241, AW268068, AI880399, AA298344, AA297180, AW362573, AA054072, AA877810, AI749293, AA877743, AI459944, AW374543, AA298415, D25577, C21047, AW189415, AW196745, AI648502, AI636811, AI680162, AI590624, AI866770, AI431909, AW082594, AI470293, AI679620, AI627880, AI824576, AI826225, AI963216, AA225339, AI269696, AI683707, AI758437, AI569309, AI811785, AI358213, AI890907, AW105620, AI345253, AI345677, AI573026, AW196097, AW168373, AW302973, AI308035, AW268060, AI348854, AI866111, AW409931, AI345608, AI680498, AI284131, AI345471, AI251221, AW022682, AI699011, AI659795, AI564765, AI478123, AW169462, AI440239, AI624548, N80094, AI800138, AL041772, AI917252, AI570169, AI818578, AI802833, AW074869, AW079572, AI613471, AL047763, AI620284, AI349937, AW151785, AI625316, AW081255, AI888944, AI400725, AI886753, AI471227, AW302988, AI872423, AL042440, AL036214, AI280670, AI493576, AI283143, AI452993, AI567238, AI814087, AI611348, AI687065, AI698391, AI345735, AI590686, AI345416, AI445165, AI345612, AI919107, AI609556, AI590423, AW087938, AA493923, AW078945, AI445368,

	AW026610, AI500077, AI345415, AI812015, AI284484, AI334884, AI932794, AI591407, AI744256, AI870192, AI446373, AW302073, AL037030, AI349967, AI539847, AW080279, AI306705, AI366985, AI345787, AW105455, AI801523, AI783504, AI610799, AW302992, AI520809, AI348897, AI352497, AI922901, AI569583, AL036631, AW198075, AW088134, AW263453, AI587606, AI783861, AI468872, AI636619, AW104196, AI611810, AI590120, AI621179, AI589947, AI349957, AW149227, AW103200, AA848053, AI924686, AF014838, I95750, AB006781, U82953, X79303, AF091738, U67958, AF038562, AF036941, AL080127, AF061943, AF162270, X93495, AL122123, AL133016, I48978, U96683, AF158248, AF113694, AR000496, U39656, L30117, AL117440, AL137527, AF017437, I89947, A08916, AF146568, A08913, AF113689, AF118070, AL049314, AJ238278, X84990, AL117585, AL117457, AL096744, AL117435, A08910, I89931, A08909, M30514, I49625, AF003737, AF113019, AL137533, AF026124, E03348, Y11587, AR059958, I03321, AL133093, A77033, A77035, X82434, AB007812, AR038969, AR038854, L19437, AF090943, I48979, AF090934, AF067728, AF090903, AL050277, AL050138, AL050393, A08912, AF081197, AJ012755, AF090900, AF113690, AF113677, AF113691, AL080124, AL137550, AF111851, AF153205, S78214, A45787, A03736, U72620, AL080060, A65341, AL080159, AL133640, E02349, Z82022, AF183393, AL137538, AL122098, AF061795, Y14314, AF151685, AL080137, AL133565, AL137476, AC002467, AL110221, AR011880, AL122110, AF026816, X63574, AL122121, AF113699, AL080074, AL137292, AF091084, AL117432, AL133645, AL133560, AF061573, S61953, AL133067, AL137478, AL049382,

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2113	HRACJ32	901515	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1159 of SEQ ID NO:2113, b is an integer of 15 to 1173, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2113, and where b is greater than or equal to a + 14.</p>	<p>AI675414, AW151946, AI095584, AW298180, AI871918, AI377209, AA031514, AI565078, AA975518, W52564, AW189257, AI922822, AI758884, AA987674, AA908398, AI679314, AA908479, AA828906, W31903, W60256, AA528246, W39266, AA977868, AI570763, AA970839, AI920871, AW338549, AI696789, AI962006, AA344350, AA299556, AA910725, AI219260, AA299411, AI921665, AA031513, AA887197, AI888609, AA937044, AI925329, AI888421, T27673, AA033870, AA034355, AI537808, AW297694, AA029323, AA173929, T27577, AI869462, AA335005, AI933599,</p>

	R36271, AW162194, AW167918, AI559752, AL036638, AL079963, AI866232, AI288285, AI610362, AI613038, AW163823, AI537677, AI540458, AW161156, AW163554, AI537187, AW020397, AI564290, AI282930, AI697324, AI524654, AI554821, AW161579, AI687295, AL079960, AI961589, AA641818, AI572396, AI382670, AW079572, AI114703, AI699143, AA420722, AI890223, AL043345, AI570966, AI469505, AI242248, AI802542, AL036901, AL037454, AI468872, AI277008, AL119836, AI919593, AI340603, AI590043, AI909697, AW021717, AI539800, AW022682, AI538850, AI568138, AI884318, AI345416, AI802240, AI345612, AL120700, AI698391, AL042191, AI345415, AI491710, AI588892, AI690748, Z99428, AI683395, AA640779, AI097643, AW198112, AW020561, AA572872, AI868740, AI798456, AI564259, AI690411, AI586576, N29277, AI538764, AI345735, AI862135, AI932638, AI499285, AW090498, AL119863, AI270295, AW303089, AI923989, AA580663, AW169604, AI862144, AW051088, AW083750, AI538885, AL114259, AI633196, AI866465, AL039086, AI623682, AW023338, AL043355, AW103628, AW162071, AI580436, AI624963, AI934011, AL119748, AW088899, AW151136, AL119399, AI434242, AI251221, AI363957, AI916419, AA833760, AW020693, AI811912, AI281653, AI281867, AI440263, AI473536, AA464646, AI475371, AI624943, AI699011, AI800464, AI270055, AL036274, AI954080, AA572758, AI824746, AI241923, AL036802, AL046618, AI312428, AL121328, AW403717, AI349645, AW074869, AI280561, AI566670, AA916133, AI890907, AI917963, AL036631, AW059713, AW150308, AI570807,

	AI567582, AI863382, AI636588, AI648458, AI431962, AI612913, AI307285, AI494201, AI249877, AI950892, AI620517, AW105431, AL048871, AI633477, AW265004, AI597805, AI247293, AI567866, AI827440, AW089572, AI559599, AI699865, AW024564, F27788, AI310155, AL036361, AW028840, AA693347, AL036396, AI969655, AI950664, AI340519, AA908294, AI677797, AI624293, AW238730, AA975952, AI634736, AI638798, AW051059, AI690813, AI349957, AI812015, AI637748, Z11887, X07819, I91443, AB031324, AB031323, L24374, L22524, L22520, X63162, L22523, L22521, L22522, L22519, X07821, X80340, AF039138, AF039137, AL050116, AL122098, AL133081, I89947, I48978, AF057300, AF057299, AL137271, AL110222, AL122050, AL137656, AL133067, AL049283, AL133014, Y11254, AL137459, AB007812, I03321, AL049382, AB016226, A08916, Y16645, X62580, AF113699, AL137533, AF106657, AL137527, AL122123, AL080234, A08913, AF067790, AF100931, AR038969, A77033, A77035, AF153205, S78214, AL133113, AL137557, I33392, I66342, AF061573, AL110196, AL133640, I48979, AL137558, AL137488, E02221, S76508, I89931, I09499, A08912, AL133606, M86826, AR029490, AF139986, U42766, AL137283, AL049300, AL117457, AL080148, AL110221, L04504, AF061943, X53587, AR011880, AL122110, S75997, AJ238278, AL117460, X57961, I68732, S61953, A65341, AL133080, Z82022, AL110197, X84990, Y09972, AL133665, AL117435, I00734, A08910, U49908, AF090934, A08909, E05822, AL137550, AF090886, AF090903, AL133093, E00617, E00717, E00778, AF113013, AL137521, E12747, D83032, AL133560, AR038854, AB019565, AR013797, A08907, A08908, E02349, AF111851, AL133075, AL122093, Y07905, AL133565,

2114	HMGBI25	901567			<p>AF008439, A21103, AF078844, AF113677, AF118094, AF159615, Z37987, AL050149, AL133016, AL096744, AF158248, S68736, A15345, AF113019, X82434, AL049430, AF125949, AF177401, AL117432, AF113691, AL137480, AL080163, AF032666, AL137479, AF126247, X79812, AF118070, AL137640, AJ242859, AL122100, AF061795, AF151685, AF106862, I49625, AF017437, AL049452, AF176651, AF090900, X98834, I89934, AL080086, AJ000937, AF113690, A18777, AF097996, AL049466</p> <p>AA195220, AW340394, AW245451, AW249311, AW247523, AA411315, AW245809, AA843490, AI744583, AI832220, AI376745, AW166921, AI671163, AI917768, AI536948, AA195229, AI751173, AW118765, AI751172, AI270398, AI934874, AI635792, AI480259, AA677092, AI689138, AI992041, AI217673, AA470811, AI873294, AW002588, AI360270, AW087675, AA904529, R56232, AI631567, AW014308, AI341110, N72697, AA884481, AA354601, AA307392, AW248893, R56314, AW276496, C00611, R96718, AW088921, AI934027, W02478, AA969594, AA766929, AW245106, AA626280, AA642780, AA249655, AA677111, AI174453, AA416840, R96719, AI472448, AA813404, AA416839</p> <p>AI587350, X95876, Z79783, U32674</p>
2115	HDTEO10	901578			<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1694 of SEQ ID NO:2114, b is an integer of 15 to 1708, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2114, and where: b is greater than or equal to a + 14.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of a-b, where a is any integer between 1 to 1863 of SEQ ID NO:2115, b is an integer of 15 to 1877, where both a and b correspond to the positions of nucleotide residues shown in SEQ ID NO:2115, and where b is greater</p>



2116	HSSGC06	901621	<p>than or equal to <math>a + 14</math>.</p> <p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 814 of SEQ ID NO:2116, <math>b</math> is an integer of 15 to 828, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:2116, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	AA612669, AW026486, AA612668, AI458253, AA311709, AI859961, AA005340, AA005433, AA397884, AI751088, AA005434, AA932249, AW273329, AA287706, AI016843, N66090, AI205137, AA488248, W90552, AA699684, AI694508, W90553, AA130969, AA609505, AA399646, AI693778, AA099841, AI201786, AI452981, AA644003, AI085190, AI808813, AI202524, N98636, T60671, AW407236, R09367, AA191378, AA827388, AI276380, AA488193, H23331, AA160239, AA309096, F12355, AI142701, T57771, AA085583, T64868, AA310662, AA357288, D58848, AA055733, R09250, AI183865, AA356179, M78761, AA045074, AA461214, AA190768, T80323, AW363425, AI677821, R17951, AL031685, AF131742, AA827467
2117	HSICN14	901875	<p>Preferably excluded from the present invention are one or more polynucleotides comprising a nucleotide sequence described by the general formula of <math>a-b</math>, where <math>a</math> is any integer between 1 to 2506 of SEQ ID NO:2117, <math>b</math> is an integer of 15 to 2520, where both <math>a</math> and <math>b</math> correspond to the positions of nucleotide residues shown in SEQ ID NO:2117, and where <math>b</math> is greater than or equal to <math>a + 14</math>.</p>	AL120519, AL120518, AW167654, AI860695, AW340140, AA878120, AA824284, AI829215, AI858970, AI983809, AA723802, AA233673, AI910795, AA527075, AI687053, AI289782, AW195947, AA494414, AI680070, AW132045, AI368513, AI688692, AW439152, AI688681, C00730, AI697102, AW293340, AA524205, AA514491, AI337294, AI858216, AI857575, AC005837, Y11274

**Polynucleotide and Polypeptide Variants**

The present invention is directed to variants of the polynucleotide sequence disclosed in SEQ ID NO:X, the complementary strand thereto, and/or the cDNA sequence contained in a deposited clone.

5       The present invention also encompasses variants of the polypeptide sequence disclosed in SEQ ID NO:Y and/or encoded by a deposited clone.

"Variant" refers to a polynucleotide or polypeptide differing from the polynucleotide or polypeptide of the present invention, but retaining essential properties thereof. Generally, variants are overall closely similar, and, in many regions, identical to the polynucleotide or  
10       polypeptide of the present invention.

The present invention is also directed to nucleic acid molecules which comprise, or alternatively consist of, a nucleotide sequence which is at least 80%, 85%, 90%, 95%, 96%, 97%, 98% or 99% identical to, for example, the nucleotide coding sequence in SEQ ID NO:X or the complementary strand thereto, the nucleotide coding sequence contained in a deposited  
15       cDNA clone or the complementary strand thereto, a nucleotide sequence encoding the polypeptide of SEQ ID NO:Y, a nucleotide sequence encoding the polypeptide encoded by the cDNA contained in a deposited clone, and/or polynucleotide fragments of any of these nucleic acid molecules (e.g., those fragments described herein). Polynucleotides which hybridize to these nucleic acid molecules under stringent hybridization conditions or  
20       alternatively, under lower stringency conditions are also encompassed by the invention, as are polypeptides encoded by these polynucleotides.

The present invention is also directed to polypeptides which comprise, or alternatively consist of, an amino acid sequence which is at least 80%, 85%, 90%, 95%, 96%, 97%, 98%, 99% or 100% identical to, for example, the polypeptide sequence shown in SEQ ID NO:Y, a  
25       polypeptide sequence encoded by SEQ ID NO:X or the complement thereof, the polypeptide sequence encoded by the cDNA contained in a deposited clone, and/or polypeptide fragments of any of these polypeptides (e.g., those fragments described herein).

By a nucleic acid having a nucleotide sequence at least, for example, 95% "identical" to a reference nucleotide sequence of the present invention, it is intended that the nucleotide  
30       sequence of the nucleic acid is identical to the reference sequence except that the nucleotide sequence may include up to five point mutations per each 100 nucleotides of the reference nucleotide sequence encoding the polypeptide. In other words, to obtain a nucleic acid

having a nucleotide sequence at least 95% identical to a reference nucleotide sequence, up to 5% of the nucleotides in the reference sequence may be deleted or substituted with another nucleotide, or a number of nucleotides up to 5% of the total nucleotides in the reference sequence may be inserted into the reference sequence. The query sequence may be an entire  
5 sequence shown in Table 1, the ORF (open reading frame), or any fragment specified as described herein.

As a practical matter, whether any particular nucleic acid molecule or polypeptide is at least 80%, 85%, 90%, 95%, 96%, 97%, 98% or 99% identical to a nucleotide sequence of the present invention can be determined conventionally using known computer programs.

10 A preferred method for determining the best overall match between a query sequence (a sequence of the present invention) and a subject sequence, also referred to as a global sequence alignment, can be determined using the FASTDB computer program based on the algorithm of Brutlag et al. (Comp. App. Biosci. (1990) 6:237-245). In a sequence alignment the query and subject sequences are both DNA sequences. An RNA sequence can be  
15 compared by converting U's to T's. The result of said global sequence alignment is in percent identity. Preferred parameters used in a FASTDB alignment of DNA sequences to calculate percent identity are: Matrix=Unitary, k-tuple=4, Mismatch Penalty=1, Joining Penalty=30, Randomization Group Length=0, Cutoff Score=1, Gap Penalty=5, Gap Size Penalty 0.05, Window Size=500 or the length of the subject nucleotide sequence, whichever  
20 is shorter.

If the subject sequence is shorter than the query sequence because of 5' or 3' deletions, not because of internal deletions, a manual correction must be made to the results. This is because the FASTDB program does not account for 5' and 3' truncations of the subject sequence when calculating percent identity. For subject sequences truncated at the 5' or 3' ends, relative to the query sequence, the percent identity is corrected by calculating the  
25 number of bases of the query sequence that are 5' and 3' of the subject sequence, which are not matched/aligned, as a percent of the total bases of the query sequence. Whether a nucleotide is matched/aligned is determined by results of the FASTDB sequence alignment. This percentage is then subtracted from the percent identity, calculated by the above  
30 FASTDB program using the specified parameters, to arrive at a final percent identity score. This corrected score is what is used for the purposes of the present invention. Only bases outside the 5' and 3' bases of the subject sequence, as displayed by the FASTDB alignment,

which are not matched/aligned with the query sequence, are calculated for the purposes of manually adjusting the percent identity score.

For example, a 90 base subject sequence is aligned to a 100 base query sequence to determine percent identity. The deletions occur at the 5' end of the subject sequence and therefore, the FASTDB alignment does not show a matched/alignment of the first 10 bases at 5' end. The 10 unpaired bases represent 10% of the sequence (number of bases at the 5' and 3' ends not matched/total number of bases in the query sequence) so 10% is subtracted from the percent identity score calculated by the FASTDB program. If the remaining 90 bases were perfectly matched the final percent identity would be 90%. In another example, a 90 base subject sequence is compared with a 100 base query sequence. This time the deletions are internal deletions so that there are no bases on the 5' or 3' of the subject sequence which are not matched/aligned with the query. In this case the percent identity calculated by FASTDB is not manually corrected. Once again, only bases 5' and 3' of the subject sequence which are not matched/aligned with the query sequence are manually corrected for. No other manual corrections are to be made for the purposes of the present invention.

By a polypeptide having an amino acid sequence at least, for example, 95% "identical" to a query amino acid sequence of the present invention, it is intended that the amino acid sequence of the subject polypeptide is identical to the query sequence except that the subject polypeptide sequence may include up to five amino acid alterations per each 100 amino acids of the query amino acid sequence. In other words, to obtain a polypeptide having an amino acid sequence at least 95% identical to a query amino acid sequence, up to 5% of the amino acid residues in the subject sequence may be inserted, deleted, (indels) or substituted with another amino acid. These alterations of the reference sequence may occur at the amino or carboxy terminal positions of the reference amino acid sequence or anywhere between those terminal positions, interspersed either individually among residues in the reference sequence or in one or more contiguous groups within the reference sequence.

As a practical matter, whether any particular polypeptide is at least 80%, 85%, 90%, 95%, 96%, 97%, 98% or 99% identical to, for instance, the amino acid sequences shown in Table 1 or a fragment thereof, or to the amino acid sequence encoded by the cDNA contained in a deposited clone or a fragment thereof, can be determined conventionally using known computer programs. A preferred method for determining the best overall match between a query sequence (a sequence of the present invention) and a subject sequence, also referred to

as a global sequence alignment, can be determined using the FASTDB computer program based on the algorithm of Brutlag et al. (Comp. App. Biosci.6:237- 245(1990)). In a sequence alignment the query and subject sequences are either both nucleotide sequences or both amino acid sequences. The result of said global sequence alignment is in percent identity. Preferred parameters used in a FASTDB amino acid alignment are: Matrix=PAM 0, k-tuple=2, Mismatch Penalty=1, Joining Penalty=20, Randomization Group Length=0, Cutoff Score=1, Window Size=sequence length, Gap Penalty=5, Gap Size Penalty=0.05, Window Size=500 or the length of the subject amino acid sequence, whichever is shorter.

If the subject sequence is shorter than the query sequence due to N- or C-terminal deletions, not because of internal deletions, a manual correction must be made to the results. This is because the FASTDB program does not account for N- and C-terminal truncations of the subject sequence when calculating global percent identity. For subject sequences truncated at the N- and C-termini, relative to the query sequence, the percent identity is corrected by calculating the number of residues of the query sequence that are N- and C-terminal of the subject sequence, which are not matched/aligned with a corresponding subject residue, as a percent of the total bases of the query sequence. Whether a residue is matched/aligned is determined by results of the FASTDB sequence alignment. This percentage is then subtracted from the percent identity, calculated by the above FASTDB program using the specified parameters, to arrive at a final percent identity score. This final percent identity score is what is used for the purposes of the present invention. Only residues to the N- and C-termini of the subject sequence, which are not matched/aligned with the query sequence, are considered for the purposes of manually adjusting the percent identity score. That is, only query residue positions outside the farthest N- and C- terminal residues of the subject sequence.

For example, a 90 amino acid residue subject sequence is aligned with a 100 residue query sequence to determine percent identity. The deletion occurs at the N-terminus of the subject sequence and therefore, the FASTDB alignment does not show a matching/alignment of the first 10 residues at the N-terminus. The 10 unpaired residues represent 10% of the sequence (number of residues at the N- and C- termini not matched/total number of residues in the query sequence) so 10% is subtracted from the percent identity score calculated by the FASTDB program. If the remaining 90 residues were perfectly matched the final percent identity would be 90%. In another example, a 90 residue subject sequence is compared with

a 100 residue query sequence. This time the deletions are internal deletions so there are no residues at the N- or C-termini of the subject sequence which are not matched/aligned with the query. In this case the percent identity calculated by FASTDB is not manually corrected. Once again, only residue positions outside the N- and C-terminal ends of the subject  
5 sequence, as displayed in the FASTDB alignment, which are not matched/aligned with the query sequence are manually corrected for. No other manual corrections are to made for the purposes of the present invention.

The variants may contain alterations in the coding regions, non-coding regions, or both. Especially preferred are polynucleotide variants containing alterations which produce  
10 silent substitutions, additions, or deletions, but do not alter the properties or activities of the encoded polypeptide. Nucleotide variants produced by silent substitutions due to the degeneracy of the genetic code are preferred. Moreover, variants in which less than 50, less than 40, less than 30, less than 20, less than 10, or 5-50, 5-25, 5-10, 1-5, or 1-2 amino acids are substituted, deleted, or added in any combination are also preferred. Polynucleotide  
15 variants can be produced for a variety of reasons, e.g., to optimize codon expression for a particular host (change codons in the human mRNA to those preferred by a bacterial host such as E. coli).

Naturally occurring variants are called "allelic variants," and refer to one of several alternate forms of a gene occupying a given locus on a chromosome of an organism. (Genes  
20 II, Lewin, B., ed., John Wiley & Sons, New York (1985).) These allelic variants can vary at either the polynucleotide and/or polypeptide level and are included in the present invention. Alternatively, non-naturally occurring variants may be produced by mutagenesis techniques or by direct synthesis.

Using known methods of protein engineering and recombinant DNA technology,  
25 variants may be generated to improve or alter the characteristics of the polypeptides of the present invention. For instance, one or more amino acids can be deleted from the N-terminus or C-terminus of the colon cancer related polypeptides without substantial loss of biological function. The authors of Ron et al., J. Biol. Chem. 268: 2984-2988 (1993), reported variant KGF proteins having heparin binding activity even after deleting 3, 8, or 27 amino-terminal  
30 amino acid residues. Similarly, Interferon gamma exhibited up to ten times higher activity after deleting 8-10 amino acid residues from the carboxy terminus of this protein. (Dobeli et al., J. Biotechnology 7:199-216 (1988).)

Moreover, ample evidence demonstrates that variants often retain a biological activity similar to that of the naturally occurring protein. For example, Gayle and coworkers (*J. Biol. Chem* 268:22105-22111 (1993)) conducted extensive mutational analysis of human cytokine IL-1a. They used random mutagenesis to generate over 3,500 individual IL-1a mutants that averaged 2.5 amino acid changes per variant over the entire length of the molecule. Multiple mutations were examined at every possible amino acid position. The investigators found that "[m]ost of the molecule could be altered with little effect on either [binding or biological activity]." (See, Abstract.) In fact, only 23 unique amino acid sequences, out of more than 3,500 nucleotide sequences examined, produced a protein that significantly differed in activity from wild-type.

Furthermore, even if deleting one or more amino acids from the N-terminus or C-terminus of a polypeptide results in modification or loss of one or more biological functions, other biological activities may still be retained. For example, the ability of a deletion variant to induce and/or to bind antibodies which recognize the secreted form will likely be retained when less than the majority of the residues of the secreted form are removed from the N-terminus or C-terminus. Whether a particular polypeptide lacking N- or C-terminal residues of a protein retains such immunogenic activities can readily be determined by routine methods described herein and otherwise known in the art.

Thus, the invention further includes polypeptide variants which show substantial biological activity. Such variants include deletions, insertions, inversions, repeats, and substitutions selected according to general rules known in the art so as to have little effect on activity. The present application is directed to nucleic acid molecules at least 80%, 85%, 90%, 95%, 96%, 97%, 98% or 99% or 100% identical to the nucleic acid sequences disclosed herein, (e.g., encoding a polypeptide having the amino acid sequence of an N and/or C terminal deletion), irrespective of whether they encode a polypeptide having functional activity. This is because even where a particular nucleic acid molecule does not encode a polypeptide having functional activity, one of skill in the art would still know how to use the nucleic acid molecule, for instance, as a hybridization probe or a polymerase chain reaction (PCR) primer. Uses of the nucleic acid molecules of the present invention that do not encode a polypeptide having functional activity include, inter alia, (1) isolating a gene or allelic or splice variants thereof in a cDNA library; (2) in situ hybridization (e.g., "FISH") to metaphase chromosomal spreads to provide precise chromosomal location of the gene, as

described in Verma et al., Human Chromosomes: A Manual of Basic Techniques, Pergamon Press, New York (1988); and (3) Northern Blot analysis for detecting mRNA expression in specific tissues.

Preferred, however, are nucleic acid molecules having sequences at least 80%, 85%,  
5 90%, 95%, 96%, 97%, 98% or 99% or 100% identical to the nucleic acid sequences disclosed herein, which do, in fact, encode a polypeptide having functional activity. By "a polypeptide having functional activity" is intended polypeptides, exhibiting activity similar, but not necessarily identical, to a functional activity of the polypeptides of the present invention (e.g., complete (full-length), mature and soluble (e.g., having sequences contained in the  
10 extracellular domain) as measured, for example, in a particular immunoassay or biological assay. For example, a functional activity can routinely be measured by determining the ability of a polypeptide of the present invention to bind a ligand. Functional activity may also be measured by determining the ability of a polypeptide, such as cognate ligand which is free or expressed on a cell surface, to induce cells expressing the polypeptide.

Of course, due to the degeneracy of the genetic code, one of ordinary skill in the art  
15 will immediately recognize that a large number of the nucleic acid molecules having a sequence at least 80%, 85%, 90%, 95%, 96%, 97%, 98%, or 99%, or 100% identical to, for example, the nucleic acid sequence of the deposited cDNA, the nucleic acid sequence shown in Table 1 (SEQ ID NO:X), or fragments thereof, will encode polypeptides "having  
20 functional activity." In fact, since degenerate variants of any of these nucleotide sequences all encode the same polypeptide, in many instances, this will be clear to the skilled artisan even without performing the above described comparison assay. It will be further recognized in the art that, for such nucleic acid molecules that are not degenerate variants, a reasonable number will also encode a polypeptide having functional activity. This is because the skilled  
25 artisan is fully aware of amino acid substitutions that are either less likely or not likely to significantly effect protein function (e.g., replacing one aliphatic amino acid with a second aliphatic amino acid), as further described below.

For example, guidance concerning how to make phenotypically silent amino acid substitutions is provided in Bowie et al., "Deciphering the Message in Protein Sequences:  
30 Tolerance to Amino Acid Substitutions," Science 247:1306-1310 (1990), wherein the authors indicate that there are two main strategies for studying the tolerance of an amino acid sequence to change.



The first strategy exploits the tolerance of amino acid substitutions by natural selection during the process of evolution. By comparing amino acid sequences in different species, conserved amino acids can be identified. These conserved amino acids are likely important for protein function. In contrast, the amino acid positions where substitutions have  
5 been tolerated by natural selection indicates that these positions are not critical for protein function. Thus, positions tolerating amino acid substitution could be modified while still maintaining biological activity of the protein.

The second strategy uses genetic engineering to introduce amino acid changes at specific positions of a cloned gene to identify regions critical for protein function. For  
10 example, site directed mutagenesis or alanine-scanning mutagenesis (introduction of single alanine mutations at every residue in the molecule) can be used. (Cunningham and Wells, Science 244:1081-1085 (1989).) The resulting mutant molecules can then be tested for biological activity.

As the authors state, these two strategies have revealed that proteins are surprisingly  
15 tolerant of amino acid substitutions. The authors further indicate which amino acid changes are likely to be permissive at certain amino acid positions in the protein. For example, most buried (within the tertiary structure of the protein) amino acid residues require nonpolar side chains, whereas few features of surface side chains are generally conserved. Moreover, tolerated conservative amino acid substitutions involve replacement of the aliphatic or  
20 hydrophobic amino acids Ala, Val, Leu and Ile; replacement of the hydroxyl residues Ser and Thr; replacement of the acidic residues Asp and Glu; replacement of the amide residues Asn and Gln, replacement of the basic residues Lys, Arg, and His; replacement of the aromatic residues Phe, Tyr, and Trp, and replacement of the small-sized amino acids Ala, Ser, Thr, Met, and Gly. Besides conservative amino acid substitution, variants of the present invention  
25 include (i) substitutions with one or more of the non-conserved amino acid residues, where the substituted amino acid residues may or may not be one encoded by the genetic code, or (ii) substitution with one or more of amino acid residues having a substituent group, or (iii) fusion of the mature polypeptide with another compound, such as a compound to increase the stability and/or solubility of the polypeptide (for example, polyethylene glycol), or (iv) fusion  
30 of the polypeptide with additional amino acids, such as, for example, an IgG Fc fusion region peptide, or leader or secretory sequence, or a sequence facilitating purification. Such variant

polypeptides are deemed to be within the scope of those skilled in the art from the teachings herein.

For example, polypeptide variants containing amino acid substitutions of charged amino acids with other charged or neutral amino acids may produce proteins with improved characteristics, such as less aggregation. Aggregation of pharmaceutical formulations both reduces activity and increases clearance due to the aggregate's immunogenic activity. (Pinckard et al., Clin. Exp. Immunol. 2:331-340 (1967); Robbins et al., Diabetes 36: 838-845 (1987); Cleland et al., Crit. Rev. Therapeutic Drug Carrier Systems 10:307-377 (1993).)

A further embodiment of the invention relates to a polypeptide which comprises the amino acid sequence of a polypeptide having an amino acid sequence which contains at least one amino acid substitution, but not more than 50 amino acid substitutions, even more preferably, not more than 40 amino acid substitutions, still more preferably, not more than 30 amino acid substitutions, and still even more preferably, not more than 20 amino acid substitutions. Of course, in order of ever-increasing preference, it is highly preferable for a polypeptide to have an amino acid sequence which comprises the amino acid sequence of a polypeptide of SEQ ID NO:Y, in order of ever-increasing preference, which contains at least one, but not more than 10, 9, 8, 7, 6, 5, 4, 3, 2 or 1 amino acid substitutions. In specific embodiments, the number of additions, substitutions, and/or deletions in the amino acid sequence of SEQ ID NO:Y or fragments thereof (e.g., the mature form and/or other fragments described herein), and/or the amino acid sequence encoded by the deposited clone or fragments thereof, is 1-5, 5-10, 5-25, 5-50, 10-50 or 50-150, conservative amino acid substitutions are preferable.

#### **Polynucleotide and Polypeptide Fragments**

The present invention is also directed to polynucleotide fragments of the polynucleotides of the invention. In the present invention, a "polynucleotide fragment" refers to a short polynucleotide having a nucleic acid sequence which: is a portion of the cDNA contained in a deposited cDNA clone; or is a portion of a polynucleotide sequence encoding the polypeptide encoded by the cDNA contained in a deposited cDNA clone; or is a portion of the polynucleotide sequence in SEQ ID NO:X or the complementary strand thereto; or is a polynucleotide sequence encoding a portion of the polypeptide of SEQ ID NO:Y; or is a polynucleotide sequence encoding a portion of a polypeptide encoded by SEQ ID NO:X or

the complementary strand thereto. The nucleotide fragments of the invention are preferably at least about 15 nt, and more preferably at least about 20 nt, still more preferably at least about 30 nt, and even more preferably, at least about 40nt, at least about 50 nt, at least about 75 nt, or at least about 150 nt in length. A fragment "at least 20 nt in length," for example, is intended to include 20 or more contiguous bases from the cDNA sequence contained in a deposited clone or the nucleotide sequence shown in SEQ ID NO:X or the complementary strand thereto. In this context "about" includes the particularly recited value, a value larger or smaller by several (5, 4, 3, 2, or 1) nucleotides, at either terminus or at both termini. These nucleotide fragments have uses that include, but are not limited to, as diagnostic probes and primers as discussed herein. Of course, larger fragments (e.g., at least 50, 150, 200, 250, 500, 600, 1000 or 2000 nucleotides in length) are also encompassed by the invention.

Moreover, representative examples of polynucleotide fragments of the invention, include, for example, fragments comprising, or alternatively consisting of, a sequence from about nucleotide number 1-50, 51-100, 101-150, 151-200, 201-250, 251-300, 301-350, 351-400, 401-450, 451-500, 501-550, 551-600, 651-700, 701-750, 751-800, 800-850, 851-900, 901-950, 951-1000, 1001-1050, 1051-1100, 1101-1150, 1151-1200, 1201-1250, 1251-1300, 1301-1350, 1351-1400, 1401-1450, 1451-1500, 1501-1550, 1551-1600, 1601-1650, 1651-1700, 1701-1750, 1751-1800, 1801-1850, 1851-1900, 1901-1950, 1951-2000, 2001-2050, 2051-2100, 2101-2150, 2151-2200, 2201-2250, 2251-2300, 2301-2350, 2351-2400, 2401-2450, 2451-2500, 2501-2550, 2551-2600, 2651-2700, 2701-2750, 2751-2800, 2800-2850, 2851-2900, 2901-2950, 2951-3000, 3001-3050, 3051-3100 and 3101 to the end of SEQ ID NO:X, or the complementary strand thereto, or the cDNA contained in the deposited clone. In this context "about" includes the particularly recited ranges, and ranges larger or smaller by several (5, 4, 3, 2, or 1) nucleotides, at either terminus or at both termini. Preferably, these fragments encode a polypeptide which has biological activity. More preferably, these polynucleotides can be used as probes or primers as discussed herein. Polynucleotides which hybridize to these nucleic acid molecules under stringent hybridization conditions or lower stringency conditions are also encompassed by the invention, as are polypeptides encoded by these polynucleotides.

Moreover, representative examples of polynucleotide fragments of the invention, include, for example, fragments comprising, or alternatively consisting of, a sequence from about nucleotide number 1-50, 51-100, 101-150, 151-200, 201-250, 251-300, 301-350, 351-

400, 401-450, 451-500, 501-550, 551-600, 651-700, 701-750, 751-800, 800-850, 851-900, 901-950, 951-1000, 1001-1050, 1051-1100, 1101-1150, 1151-1200, 1201-1250, 1251-1300, 1301-1350, 1351-1400, 1401-1450, 1451-1500, 1501-1550, 1551-1600, 1601-1650, 1651-1700, 1701-1750, 1751-1800, 1801-1850, 1851-1900, 1901-1950, 1951-2000, 2001-2050, 2051-2100, 2101-2150, 2151-2200, 2201-2250, 2251-2300, 2301-2350, 2351-2400, 2401-2450, 2451-2500, 2501-2550, 2551-2600, 2601-2650, 2651-2700, 2701-2750, 2751-2800, 2801-2850, 2851-2900, 2901-2950, 2951-3000, 3001-3050, 3051-3100 and 3101 to the end of the cDNA nucleotide sequence contained in the deposited cDNA clone, or the complementary strand thereto. In this context "about" includes the particularly recited range, or a range larger or smaller by several (5, 4, 3, 2, or 1) nucleotides, at either terminus or at both termini. Preferably, these fragments encode a polypeptide which has a functional activity (e.g., biological activity) of the polypeptide encoded by the cDNA nucleotide sequence contained in the deposited cDNA clone. More preferably, these fragments can be used as probes or primers as discussed herein. Polynucleotides which hybridize to one or more of these fragments under stringent hybridization conditions or alternatively, under lower stringency conditions, are also encompassed by the invention, as are polypeptides encoded by these polynucleotides or fragments.

In the present invention, a "polypeptide fragment" refers to an amino acid sequence which is a portion of that contained in SEQ ID NO:Y, encoded by SEQ ID NO:X or the complement thereof and/or encoded by the cDNA contained in the deposited clone. Protein (polypeptide) fragments may be "free-standing," or comprised within a larger polypeptide of which the fragment forms a part or region, most preferably as a single continuous region. Representative examples of polypeptide fragments of the invention, include, for example, fragments comprising, or alternatively consisting of, from about amino acid number 1-20, 21-40, 41-60, 61-80, 81-100, 102-120, 121-140, 141-160, 161-180, 181-200, 201-220, 221-240, 241-260, 261-280, 281-300, 301-320, 321-340, 341-360, 361-380, 381-400, 401-420, 421-440, 441-460, 461-480, 481-500, 501-520, 521-540, 541-560, 561-580, 581-600, 601-620, 621-640, 641-660, 661-680, 681-700, 701-720, 721-740, 741-760, 761-780, 781-800, 801-820, 821-840, 841-860 and 861 to the end of SEQ ID NO:Y. Moreover, polypeptide fragments can be about 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 100, 110, 120, 130, 140, or 150 amino acids in length. In this context "about" includes the particularly recited ranges or values, and ranges or values larger or smaller by several (5, 4, 3,

2, or 1) amino acids, at either extreme or at both extremes. Polynucleotides encoding these polypeptides are also encompassed by the invention.

Even if deletion of one or more amino acids from the N-terminus of a protein results in modification or loss of one or more biological functions of the protein, other functional activities (e.g., biological activities, ability to multimerize, ability to bind a ligand) may still be retained. For example, the ability of shortened muteins to induce and/or bind to antibodies which recognize the complete or mature forms of the polypeptides generally will be retained when less than the majority of the residues of the complete or mature polypeptide are removed from the N-terminus. Whether a particular polypeptide lacking N-terminal residues of a complete polypeptide retains such immunologic activities can readily be determined by routine methods described herein and otherwise known in the art. It is not unlikely that a mutein with a large number of deleted N-terminal amino acid residues may retain some biological or immunogenic activities. In fact, peptides composed of as few as six amino acid residues may often evoke an immune response.

Accordingly, polypeptide fragments include the secreted protein as well as the mature form. Further preferred polypeptidic fragments include the secreted protein or the mature form having a continuous series of deleted residues from the amino or the carboxy terminus, or both. For example, any number of amino acids, ranging from 1-60, can be deleted from the amino terminus of either the secreted polypeptide or the mature form. Similarly, any number of amino acids, ranging from 1-30, can be deleted from the carboxy terminus of the secreted protein or mature form. Furthermore, any combination of the above amino and carboxy terminus deletions are preferred. Similarly, polynucleotides encoding these polypeptide fragments are also preferred.

The present invention further provides polypeptides having one or more residues deleted from the amino terminus of the amino acid sequence of a polypeptide disclosed herein (e.g., a polypeptide of SEQ ID NO:Y, and/or a polypeptide encoded by the cDNA contained in a deposited clone). In particular, N-terminal deletions may be described by the general formula m-q, where q is a whole integer representing the total number of amino acid residues in a polypeptide of the invention (e.g., the polypeptide disclosed in SEQ ID NO:Y), and m is defined as any integer ranging from 2 to q-6. Polynucleotides encoding these polypeptides are also encompassed by the invention.

Also as mentioned above, even if deletion of one or more amino acids from the C-terminus of a protein results in modification or loss of one or more biological functions of the protein, other functional activities (e.g., biological activities, ability to multimerize, ability to bind a ligand) may still be retained. For example the ability of the shortened mutein to induce and/or bind to antibodies which recognize the complete or mature forms of the polypeptide generally will be retained when less than the majority of the residues of the complete or mature polypeptide are removed from the C-terminus. Whether a particular polypeptide lacking C-terminal residues of a complete polypeptide retains such immunologic activities can readily be determined by routine methods described herein and otherwise known in the art. It is not unlikely that a mutein with a large number of deleted C-terminal amino acid residues may retain some biological or immunogenic activities. In fact, peptides composed of as few as six amino acid residues may often evoke an immune response.

Accordingly, the present invention further provides polypeptides having one or more residues from the carboxy terminus of the amino acid sequence of a polypeptide disclosed herein (e.g., a polypeptide of SEQ ID NO:Y, a polypeptide encoded by the polynucleotide sequence contained in SEQ ID NO:X, and/or a polypeptide encoded by the cDNA contained in deposited cDNA clone referenced in Table 1). In particular, C-terminal deletions may be described by the general formula 1-n, where n is any whole integer ranging from 6 to q-1, and where n corresponds to the position of an amino acid residue in a polypeptide of the invention. Polynucleotides encoding these polypeptides are also encompassed by the invention.

In addition, any of the above described N- or C-terminal deletions can be combined to produce a N- and C-terminal deleted polypeptide. The invention also provides polypeptides having one or more amino acids deleted from both the amino and the carboxyl termini, which may be described generally as having residues m-n of a polypeptide encoded by SEQ ID NO:X (e.g., including, but not limited to the preferred polypeptide disclosed as SEQ ID NO:Y), or the cDNA contained in a deposited clone, and/or the complement thereof, where n and m are integers as described above. Polynucleotides encoding these polypeptides are also encompassed by the invention.

Any polypeptide sequence contained in the polypeptide of SEQ ID NO:Y, encoded by the polynucleotide sequences set forth as SEQ ID NO:X or the complement thereof, or encoded by the cDNA in the related cDNA clone contained in the deposit may be analyzed to

determine certain preferred regions of the polypeptide. For example, the amino acid sequence of a polypeptide encoded by a polynucleotide sequence of SEQ ID NO:X or the complement thereof, or the cDNA in a deposited cDNA clone may be analyzed using the default parameters of the DNASTAR computer algorithm (DNASTAR, Inc., 1228 S. Park St., Madison, WI 53715 USA; <http://www.dnastar.com/>).

Polypeptide regions that may be routinely obtained using the DNASTAR computer algorithm include, but are not limited to, Garnier-Robson alpha-regions, beta-regions, turn-regions, and coil-regions, Chou-Fasman alpha-regions, beta-regions, and turn-regions, Kyte-Doolittle hydrophilic regions and hydrophobic regions, Eisenberg alpha- and beta-amphipathic regions, Karplus-Schulz flexible regions, Emini surface-forming regions and Jameson-Wolf regions of high antigenic index. Among highly preferred polynucleotides of the invention in this regard are those that encode polypeptides comprising regions that combine several structural features, such as several (e.g., 1, 2, 3 or 4) of the features set out above.

Additionally, Kyte-Doolittle hydrophilic regions and hydrophobic regions, Emini surface-forming regions, and Jameson-Wolf regions of high antigenic index (i.e., containing four or more contiguous amino acids having an antigenic index of greater than or equal to 1.5, as identified using the default parameters of the Jameson-Wolf program) can routinely be used to determine polypeptide regions that exhibit a high degree of potential for antigenicity. Regions of high antigenicity are determined from data by DNASTAR analysis by choosing values which represent regions of the polypeptide which are likely to be exposed on the surface of the polypeptide in an environment in which antigen recognition may occur in the process of initiation of an immune response.

Preferred polypeptide fragments of the invention are fragments comprising, or alternatively consisting of, an amino acid sequence that displays a functional activity of the polypeptide sequence of which the amino acid sequence is a fragment.

By a polypeptide demonstrating a "functional activity" is meant, a polypeptide capable of displaying one or more known functional activities associated with a full-length (complete) protein of the invention. Such functional activities include, but are not limited to, biological activity, antigenicity [ability to bind (or compete with a polypeptide for binding) to an anti-polypeptide antibody], immunogenicity (ability to generate antibody which binds to

a specific polypeptide of the invention), ability to form multimers with polypeptides of the invention, and ability to bind to a receptor or ligand for a polypeptide.

Other preferred polypeptide fragments are biologically active fragments. Biologically active fragments are those exhibiting activity similar, but not necessarily identical, to an activity of the polypeptide of the present invention. The biological activity of the fragments may include an improved desired activity, or a decreased undesirable activity.

In preferred embodiments, polypeptides of the invention comprise, or alternatively consist of, one, two, three, four, five or more of the antigenic fragments of the polypeptide of SEQ ID NO:Y, or portions thereof. Polynucleotides encoding these polypeptides are also encompassed by the invention.



Table 8

Contig ID/ Sequence ID	Epitopes
390631	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4278 as residues: Asn-1 to Asn-6.
410299	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4279 as residues: Trp-26 to Met-31.
456200	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4280 as residues: Pro-16 to His-26, Arg-45 to Gly-51.
471563	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4283 as residues: Gly-37 to Glu-47.
488131	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4284 as residues: Met-26 to Leu-32, Gly-41 to Asn-46.
500696	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4286 as residues: Lys-16 to Glu-31, Ser-47 to Glu-54.
506406	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4288 as residues: Thr-110 to Tyr-118.
506619	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4289 as residues: Cys-50 to Phe-57, Phe-69 to Asp-76, Ser-89 to Gln-104, Glu-145 to Leu-153.
507852	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4290 as residues: Glu-8 to Trp-18, Arg-46 to Ala-51.
509423	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4291 as residues: Tyr-50 to Ser-56, His-58 to Tyr-65.
524721	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4294 as residues: Pro-1 to Ser-8.
524901	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4295 as residues: Leu-34 to Lys-39, Lys-57 to Gly-63.
527600	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4296 as residues: Val-28 to Gly-34, His-57 to His-63.
529050	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4298 as residues: Asn-2 to Lys-8.
529465	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4299 as residues: Ala-12 to Gln-24.
532810	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4302 as residues: Pro-1 to Trp-7, Glu-124 to Trp-130.
541126	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4304 as residues: Thr-1 to Asn-10, Ala-72 to Gly-77, Val-84 to Gly-90.
542268	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4305 as residues: Pro-34 to Pro-40, Pro-45 to Ser-50, Gly-73 to Gly-82.
547920	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4306 as residues: Pro-28 to Thr-35.
552465	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4310 as residues: Pro-4 to Gly-10, Thr-17 to Leu-29, Pro-53 to Gly-58, Gln-78 to Lys-86, Pro-88 to Lys-94, His-137 to Gly-142.

554369	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4311 as residues: Gln-20 to Gln-27.
557152	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4312 as residues: Ser-69 to Pro-74.
557230	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4313 as residues: Pro-21 to Cys-31, Val-34 to Gly-42.
570796	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4315 as residues: Glu-34 to Ala-39.
573181	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4316 as residues: Gly-4 to Arg-11, Gly-17 to Ala-24.
573793	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4318 as residues: Glu-4 to Ser-9.
573796	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4319 as residues: Pro-4 to Asn-13, Asn-57 to Arg-66, Pro-89 to Asn-99.
574927	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4321 as residues: Asp-1 to Ile-6, Pro-37 to Gln-42, Pro-61 to Trp-68.
575139	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4322 as residues: Met-2 to Asp-9.
575591	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4323 as residues: Ala-2 to Gly-11.
577390	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4325 as residues: Glu-53 to Leu-58, Gln-60 to Glu-65.
577685	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4326 as residues: Ile-5 to Gln-12, Leu-42 to Asn-51.
578660	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4328 as residues: His-1 to Phe-6, Val-11 to Arg-23.
580860	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4329 as residues: Ser-14 to Asn-22.
581143	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4330 as residues: Ile-1 to Gly-6.
584899	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4331 as residues: Ala-29 to Asn-35.
600669	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4332 as residues: Cys-1 to Ala-18, Cys-55 to Ile-61.
611839	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4333 as residues: Arg-35 to Gly-41.
614078	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4334 as residues: Glu-8 to Leu-14.
630230	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4338 as residues: Arg-77 to Lys-83.
637605	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4340 as residues: Ser-1 to Val-11.
638125	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4341 as residues: Ser-7 to Glu-12, Pro-20 to Ser-26, Arg-31 to Glu-43, Ala-69 to Glu-80, Val-90 to His-95, Pro-100 to Ser-107, Ser-109 to Glu-115, Ala-117 to Arg-124.
638249	Preferred epitopes include those comprising a sequence shown in SEQ

	ID NO. 4343 as residues: Asp-1 to Pro-28, Gln-73 to Ser-79, Ile-91 to Gly-96, Tyr-99 to Asp-109, Gln-183 to Pro-193, Val-249 to Thr-261.
638319	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4344 as residues: Gly-23 to Gly-28, Asp-35 to Gln-53.
651380	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4345 as residues: Thr-16 to Lys-35, Lys-46 to Arg-51.
651876	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4346 as residues: Arg-1 to Asp-12, Pro-25 to Ala-34, Ala-50 to Gly-55, Glu-66 to Lys-86.
653175	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4347 as residues: Thr-45 to Asn-50.
655544	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4348 as residues: Arg-2 to Asp-18, Leu-45 to Leu-51.
656722	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4349 as residues: Gln-21 to Leu-38.
659801	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4350 as residues: Gly-2 to Gly-20, Pro-45 to Ala-51, Glu-105 to Gln-112, Gln-117 to Glu-122, Ala-207 to Leu-215.
660020	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4351 as residues: Ser-40 to Thr-52.
664481	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4353 as residues: Gly-1 to Glu-15, Phe-20 to Tyr-25, Phe-53 to Asn-58, Glu-82 to Lys-93.
665154	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4354 as residues: Pro-18 to Arg-29.
668040	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4356 as residues: Glu-5 to Ala-14, Arg-69 to Ala-76, Ala-114 to Glu-120, Ser-132 to Leu-137.
668717	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4358 as residues: Arg-3 to Gly-12, Ala-51 to Asp-65, Leu-78 to Glu-84, Arg-118 to Asp-131, Leu-157 to Asn-168.
671361	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4360 as residues: Asn-1 to Ser-6, Glu-15 to Gln-20.
674203	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4361 as residues: Gly-7 to Ile-13.
674745	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4362 as residues: Val-17 to Arg-26, Lys-38 to Leu-48, Gln-129 to Trp-136, Gln-258 to Leu-263, Ala-272 to Glu-284, Pro-380 to Asp-391.
674761	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4363 as residues: Ala-14 to His-19.
677212	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4364 as residues: Gly-1 to Ser-14, Asn-29 to Trp-34, Lys-50 to Arg-60.
685895	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4366 as residues: Arg-28 to Ser-33.
688040	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4367 as residues: Thr-2 to Ser-7, Pro-132 to Asp-138, Ile-161 to Pro-170, Pro-212 to Asn-217, Gly-280 to Gln-313, Ser-332 to His-337,

	Asn-366 to Gly-372.
688044	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4368 as residues: Asn-33 to Pro-55, Lys-67 to Arg-74, Gly-85 to Tyr-94, Arg-101 to Pro-115, Ser-123 to Cys-129, Pro-155 to Val-162, Pro-172 to Cys-184.
691124	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4370 as residues: Pro-27 to Arg-35.
691721	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4371 as residues: Lys-23 to Gln-29, Gly-59 to Asn-77.
693582	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4372 as residues: Lys-12 to Lys-17.
696007	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4373 as residues: Gln-93 to Arg-101, Tyr-104 to Thr-113, His-134 to Gln-145, Ser-154 to Gln-165, Val-231 to Pro-248.
703700	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4377 as residues: Lys-1 to Ser-21.
705461	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4378 as residues: Ala-53 to Glu-59, Thr-69 to Gln-77, Glu-107 to Trp-114.
707464	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4382 as residues: Glu-1 to Tyr-14, Lys-41 to Arg-51, Thr-54 to Arg-73, Gly-77 to Thr-84, Thr-92 to Ser-100, Gln-107 to Arg-112, Ala-114 to Ser-141.
709015	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4383 as residues: Pro-62 to Ser-67.
711878	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4387 as residues: Ser-3 to Lys-10.
712638	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4388 as residues: Leu-31 to His-36, Val-94 to Phe-105.
715343	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4392 as residues: Phe-7 to Ile-12, Leu-17 to Ser-24.
716212	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4393 as residues: Ser-1 to Trp-6, Pro-8 to Pro-21, Arg-60 to Asp-65, Tyr-70 to Lys-80, Lys-116 to Met-121.
717222	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4394 as residues: Glu-40 to Ala-45, Pro-66 to Ser-80, Gly-99 to Ala-107.
719829	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4396 as residues: Leu-15 to Cys-20.
721985	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4397 as residues: Asp-1 to Leu-19.
722249	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4398 as residues: Ala-54 to Gly-59, Ser-67 to Gly-78, Ala-131 to Pro-136, Pro-151 to His-157, Pro-172 to Asn-181, His-183 to Gln-192, Ala-200 to Asn-208, Thr-220 to Ile-226, Glu-335 to Arg-341, Ser-397 to Cys-404, Lys-415 to Phe-423, Lys-432 to Leu-437.
722258	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4399 as residues: Trp-15 to Ala-24, Arg-38 to Glu-45, Tyr-51 to Gly-59.

725110	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4401 as residues: Leu-23 to Asn-32.
725201	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4402 as residues: Asn-1 to Ser-9, Leu-49 to Leu-64, Leu-68 to Arg-73, Lys-83 to Thr-90.
727365	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4404 as residues: Val-36 to Lys-51, Asn-59 to Asn-76, Val-91 to Lys-107, Leu-112 to Cys-135, Arg-140 to Lys-150, Pro-157 to Glu-173, Thr-188 to Lys-201, Lys-207 to Ile-226, Leu-234 to Thr-258, Glu-260 to Ile-268, Ser-275 to Lys-286, Val-288 to Glu-299.
731881	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4407 as residues: Lys-8 to His-18.
734012	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4411 as residues: Lys-34 to Ser-39.
735603	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4412 as residues: His-1 to Gln-6, Glu-19 to Val-26.
739061	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4413 as residues: Asn-7 to Lys-13.
741134	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4414 as residues: Pro-10 to Trp-18.
741804	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4416 as residues: Asp-21 to Ser-30, His-37 to Lys-48, Phe-75 to Arg-82.
742220	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4417 as residues: Val-17 to Pro-23, Ser-72 to His-79, Thr-93 to Ile-100, Pro-102 to Asp-108, Asn-111 to Tyr-117, Gly-134 to Lys-141.
744605	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4418 as residues: Asp-1 to Lys-11.
745368	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4420 as residues: Lys-10 to Ser-16, Pro-30 to Arg-37.
750486	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4422 as residues: Asp-21 to Asp-28, Ser-34 to Asp-40.
751119	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4423 as residues: Gly-1 to Gly-13, Gly-18 to Glu-29.
753226	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4425 as residues: Asp-1 to Arg-9, Asn-51 to Cys-57, Cys-125 to Leu-137, Cys-153 to Trp-166, Leu-181 to Glu-186, Ser-207 to Thr-212.
756466	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4427 as residues: Ser-1 to Asn-8.
756649	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4429 as residues: Gly-1 to His-10, His-21 to Asp-32.
757213	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4430 as residues: Ala-17 to Leu-23, Gly-28 to Gly-42, His-55 to Glu-62, Gly-92 to Ala-100.
757508	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4431 as residues: Ser-23 to Arg-32, Glu-39 to Thr-45, Glu-52 to Lys-57.
757980	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4433 as residues: Phe-9 to His-21.

760141	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4434 as residues: Ser-15 to Gly-21, Asp-35 to His-41, Glu-45 to Lys-68, Thr-91 to Trp-103, Glu-105 to Gln-116, Asp-124 to Gly-130, Asp-137 to Thr-147, Glu-162 to Gly-188, Lys-205 to Gly-212, Asn-223 to Trp-229, Arg-241 to Lys-254.
761491	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4435 as residues: Gly-55 to Glu-63.
764179	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4438 as residues: Asn-1 to Thr-7.
766961	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4439 as residues: Leu-5 to Glu-16.
768034	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4441 as residues: Ser-20 to Lys-29.
769965	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4442 as residues: Asn-1 to Ser-9, Pro-11 to Cys-38, Pro-41 to Val-46, Trp-55 to Ser-62, Pro-73 to Phe-78, Leu-97 to Gln-103, Arg-110 to Gly-116.
771486	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4443 as residues: Glu-16 to Lys-21.
772044	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4444 as residues: Ala-11 to Ala-23.
772357	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4445 as residues: Phe-61 to Glu-66.
772876	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4446 as residues: Arg-80 to Thr-91.
774019	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4447 as residues: Ser-1 to Cys-9, Gln-22 to Gln-28, Gly-41 to Gly-47, Leu-57 to Arg-66.
774516	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4449 as residues: Leu-41 to Gln-48.
775355	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4450 as residues: Ser-40 to Ala-46.
775367	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4451 as residues: Lys-8 to Lys-28.
775791	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4452 as residues: Arg-19 to Asp-29, Asn-81 to Lys-86.
778583	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4455 as residues: Thr-10 to Trp-16, Gly-41 to Phe-46, Ser-55 to Phe-65.
779588	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4457 as residues: Leu-19 to Lys-26.
781085	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4458 as residues: Ala-57 to Ser-64, Lys-69 to Thr-75.
781366	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4460 as residues: Arg-24 to Pro-35, Gly-72 to His-77.
781376	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4461 as residues: Pro-39 to Cys-44, Pro-54 to Gly-65.
782276	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4463 as residues: Ile-1 to Gln-9, Arg-27 to Pro-34, Val-36 to

	Pro-60, Lys-86 to Asp-95, Lys-102 to Ser-113, Ser-118 to Asn-130, Asp-132 to Lys-143, Asp-151 to Glu-157.
783413	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4465 as residues: Lys-33 to Val-39.
783668	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4466 as residues: Gly-8 to Leu-17, Leu-27 to Ser-36, Pro-41 to Ser-51.
785087	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4468 as residues: Lys-26 to Lys-42.
785465	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4470 as residues: Gly-6 to Arg-21.
788626	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4471 as residues: Leu-1 to Lys-21, Asp-26 to Asp-34, Ala-85 to Tyr-90.
788838	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4472 as residues: Ala-14 to Ile-19, Glu-48 to Glu-54, Gln-76 to Glu-89.
789419	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4474 as residues: Pro-16 to Asn-22.
789631	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4475 as residues: Thr-10 to Gly-18.
789872	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4476 as residues: Ser-1 to Phe-16, His-36 to Gly-45, Pro-49 to Pro-71, Pro-77 to Lys-84.
790190	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4477 as residues: Ser-41 to Thr-49.
790547	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4478 as residues: Leu-1 to Gln-19, Glu-24 to Pro-31, Lys-36 to Cys-45.
792557	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4483 as residues: Lys-51 to Arg-58.
792624	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4484 as residues: Ser-15 to Lys-22, Pro-25 to Gly-47, Glu-55 to Thr-64.
793437	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4485 as residues: Pro-1 to Gly-7, Thr-9 to Phe-18, Ala-32 to Trp-45, Pro-53 to Leu-60, Thr-66 to Arg-71.
796023	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4488 as residues: Ala-69 to Cys-74, Ile-131 to Glu-136, Gly-161 to Asn-169, Leu-174 to Trp-185.
796181	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4489 as residues: Ser-26 to Arg-32, Ala-81 to Cys-87, Pro-118 to Lys-126.
797079	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4490 as residues: Phe-2 to Cys-8, Ser-30 to His-36.
797477	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4491 as residues: Gly-14 to Leu-24.
797486	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4492 as residues: Ser-18 to Gln-25, Pro-35 to Thr-44, Pro-94 to

	Trp-99, Gln-108 to Ser-120, Pro-182 to Gly-187, Pro-192 to Gly-198, Trp-284 to Thr-292.
797747	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4493 as residues: Asn-2 to Ala-11, His-35 to Pro-40.
805448	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4496 as residues: Leu-1 to Tyr-7, Gly-15 to Asn-26.
806690	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4497 as residues: Gly-34 to Trp-43, Trp-48 to Lys-54.
810870	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4498 as residues: Val-12 to Ile-21.
811047	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4499 as residues: Phe-8 to Gly-13, Glu-16 to Asn-34, Ser-179 to Cys-185, Thr-206 to Phe-219.
812745	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4500 as residues: Gly-50 to His-62, Lys-169 to Arg-174, Thr-200 to Asp-206, Leu-208 to Gly-214, Pro-244 to Glu-254, Asp-304 to Gln-310, Gln-318 to Trp-323, Thr-410 to His-415.
812871	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4502 as residues: Ser-22 to Arg-29.
813482	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4503 as residues: Cys-53 to His-65, Glu-71 to Gln-91, Asn-123 to Phe-131, Ala-157 to Pro-171, Gln-197 to Ala-238.
815696	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4504 as residues: Arg-80 to Glu-86, Pro-102 to Thr-110, Pro-113 to Phe-122, Asn-124 to Tyr-131, Thr-149 to Cys-156, Thr-184 to Pro-196, Ser-203 to Cys-215, Gly-226 to Asp-231, Pro-285 to Gly-290.
821335	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4505 as residues: Ser-47 to Cys-59.
827315	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4508 as residues: Asp-29 to Phe-36, Phe-39 to Gly-51.
827740	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4511 as residues: Ile-22 to Lys-28.
828180	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4512 as residues: Glu-38 to Arg-52, Ser-56 to Val-62.
828552	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4513 as residues: Ser-1 to Ser-10, Leu-64 to Asp-69, Gly-102 to Arg-107.
828919	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4515 as residues: Thr-49 to Val-54, Leu-83 to Lys-91, Gly-121 to Thr-130, Asp-165 to Glu-172, Thr-180 to Gly-188.
829084	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4516 as residues: Glu-37 to Trp-47.
829148	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4517 as residues: Pro-33 to Lys-40.
829161	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4518 as residues: Met-5 to Glu-18, Asp-24 to Tyr-30.
830123	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4519 as residues: Ala-20 to Arg-25.
830194	Preferred epitopes include those comprising a sequence shown in SEQ



	ID NO. 4521 as residues: Ala-43 to Lys-51, Glu-66 to Leu-74, His-81 to Glu-88, Arg-98 to Ser-105, Gly-111 to Gln-116, Leu-166 to Lys-182, Leu-261 to Ala-273, Glu-294 to Arg-302, Glu-335 to Asp-347.
830343	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4524 as residues: Ser-19 to Gly-24, Lys-73 to Leu-94, Ala-101 to Arg-112, Gly-137 to Ala-143, Glu-160 to Arg-168, Ser-173 to Lys-183.
830347	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4525 as residues: Asp-33 to Ala-39.
830382	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4526 as residues: Leu-47 to Val-63, Ser-69 to Ser-76.
830465	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4528 as residues: Pro-1 to Thr-8, Ser-54 to Gln-61, Thr-80 to Thr-85, Gln-92 to Tyr-98, Gln-154 to Gln-162, Glu-172 to Ile-177, Val-181 to Lys-188, Lys-213 to Asn-225, Ser-234 to Pro-239, Ile-294 to Lys-307, Gly-350 to Asn-355.
830498	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4529 as residues: Pro-39 to Asn-47.
830540	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4530 as residues: Leu-31 to Lys-37, Arg-48 to Asn-54.
830586	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4533 as residues: Pro-1 to Gln-15, Arg-33 to Leu-40, Arg-72 to Ser-78, Leu-98 to Asp-103, Phe-116 to Gly-124, Pro-152 to Arg-158, Thr-193 to Pro-200, Leu-213 to Phe-219, Asp-229 to Lys-237, Lys-246 to Lys-258, Arg-275 to Thr-280, Thr-306 to Lys-312, Leu-320 to Arg-328, Ala-335 to Asn-340, Gly-342 to Trp-349, Cys-364 to Pro-372.
830693	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4535 as residues: Met-2 to Thr-12, Gln-52 to Glu-67, Glu-72 to Val-79, Asn-158 to Arg-165, Met-173 to Gln-180, Glu-200 to Arg-206, Ala-220 to Ala-228, Arg-232 to Leu-242, Asp-246 to Gln-254, Thr-260 to Lys-267, Leu-343 to Glu-349.
830723	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4537 as residues: Ile-68 to Thr-75, Asp-106 to Asp-117.
830743	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4538 as residues: Pro-11 to Phe-16, Thr-48 to Ser-60.
830804	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4539 as residues: Thr-62 to Gly-70.
830816	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4540 as residues: Thr-51 to Asp-61, Pro-92 to Asn-100, Thr-131 to Asn-138, Lys-140 to His-151, Glu-168 to Arg-184, Glu-192 to Glu-197, Ala-202 to Leu-212, Tyr-218 to Lys-223, Ala-239 to Leu-246, Leu-250 to Gly-256, Pro-289 to Glu-295, Lys-314 to Lys-326, Gln-335 to Glu-340, Asp-354 to Ser-359.
830829	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4541 as residues: Pro-16 to His-21, Cys-28 to His-35, Val-43 to Arg-49, Pro-116 to Tyr-123.
830859	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4542 as residues: Gln-13 to His-28, Pro-73 to Gly-80, Pro-87 to Asn-92.
830879	Preferred epitopes include those comprising a sequence shown in SEQ

	ID NO. 4543 as residues: Cys-34 to Leu-44, Ser-60 to Gly-69, Asp-118 to Gly-123, Cys-148 to Gln-154.
830901	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4544 as residues: Arg-8 to Ser-16, Val-32 to Thr-38, Glu-139 to Lys-145, Arg-224 to Arg-232.
831019	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4545 as residues: Phe-16 to Ser-21.
831057	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4546 as residues: Arg-1 to Gly-14, Thr-19 to Gly-25, Ala-31 to Ala-41, Glu-53 to Ile-62, Val-66 to Glu-75, Ser-103 to Asp-113, Ala-135 to Asp-140.
831099	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4547 as residues: Leu-12 to Gly-18, Leu-93 to Ile-98, Lys-165 to Ser-183, Thr-198 to Lys-211, Glu-232 to Gly-237, Pro-239 to Gly-249, Arg-257 to Asp-278, Cys-292 to Glu-297, Arg-306 to Ser-316, Asp-323 to Asn-331, Glu-347 to Gly-354, Thr-365 to Asn-370, Pro-390 to Thr-396, Asn-420 to Ser-433, Val-440 to Gln-451, His-457 to Asp-465, Phe-533 to Met-538, Ala-540 to Tyr-550, Pro-560 to Lys-565.
831117	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4548 as residues: Lys-50 to Tyr-55.
831163	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4549 as residues: Ser-31 to Arg-40.
831212	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4551 as residues: Arg-34 to Gly-45, Pro-50 to Ala-58.
831234	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4552 as residues: Gly-28 to Pro-33, Gln-66 to Gln-72.
831268	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4554 as residues: Ser-16 to Lys-21.
831307	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4555 as residues: Pro-19 to Ile-26, Ala-43 to Thr-49, Ser-52 to Lys-69, Phe-126 to Arg-134, Pro-153 to Phe-161, Ser-192 to Leu-198, Arg-222 to Thr-229.
831390	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4558 as residues: Trp-50 to Gly-55, Leu-109 to Val-119, Phe-146 to Asp-158, Ser-165 to Trp-172, Phe-192 to Ile-197, Leu-241 to Asp-252, Lys-268 to Pro-273, Ser-310 to Lys-315, Asp-334 to Ala-342, Pro-348 to Tyr-353.
831426	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4559 as residues: Gly-8 to Phe-18, His-26 to Phe-41, Glu-56 to Gly-62, Phe-114 to Lys-126, Asn-198 to Ser-203, Asn-234 to Ile-242, Glu-264 to Pro-270.
831453	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4560 as residues: Tyr-34 to His-42, Leu-44 to Leu-49.
831465	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4561 as residues: Thr-2 to Ser-9, Pro-23 to Ser-28, Phe-55 to Ala-60, Phe-72 to Ile-77, Leu-124 to Gly-136, Glu-138 to Val-144.
831586	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4563 as residues: Gln-14 to Glu-28.
831664	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4564 as residues: Lys-1 to Asp-42, Arg-71 to Ala-76, Gln-138

	to Phe-145, Lys-170 to Thr-178, Cys-186 to Asp-192.
831687	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4565 as residues: Ala-56 to Tyr-63.
831753	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4567 as residues: His-10 to Gly-16, Gly-30 to Phe-36, Ala-41 to Lys-47, Phe-63 to Trp-72.
831757	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4568 as residues: Val-81 to Lys-86.
831795	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4569 as residues: Asn-23 to Pro-28, Arg-36 to Ser-42.
831796	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4570 as residues: Pro-1 to Ser-8.
831880	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4571 as residues: Asp-18 to Ser-24, His-34 to Gly-47.
831899	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4572 as residues: Asp-11 to Trp-16, Pro-37 to Thr-44, Pro-74 to Pro-82, Arg-112 to Gln-119, Cys-126 to Arg-138, Arg-199 to Thr-204.
831910	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4573 as residues: Gly-15 to Trp-21, Ser-84 to Leu-93.
831931	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4574 as residues: Asn-29 to Ser-34.
831942	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4575 as residues: Arg-14 to Trp-19, Pro-29 to Gly-37, Cys-51 to Ala-62, Glu-84 to Glu-91, Ile-101 to Pro-107, Glu-118 to Thr-123, Lys-170 to Gln-175, Thr-197 to Lys-228.
832009	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4577 as residues: Leu-17 to Arg-32.
832010	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4578 as residues: Leu-1 to Lys-21, Glu-39 to Cys-47, Lys-49 to Gln-61, His-64 to Gly-76, Thr-83 to Lys-90, His-92 to Ile-99.
832093	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4580 as residues: Pro-29 to Tyr-35, Phe-37 to His-42.
832187	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4583 as residues: Glu-11 to Pro-24, Gly-90 to Leu-96, Ser-109 to Gly-120.
832575	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4588 as residues: Thr-24 to Arg-29, Ala-55 to Tyr-60, Tyr-77 to Asp-89, Leu-108 to Gly-115, Thr-142 to Gly-149.
832593	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4589 as residues: Glu-13 to Glu-18.
832597	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4590 as residues: Val-3 to Asp-13.
834890	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4591 as residues: Arg-8 to Lys-13, Gly-35 to Lys-42, Ala-48 to Lys-54, Ala-105 to Leu-110, Gly-150 to Val-157, Phe-164 to Asn-173.
835079	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4592 as residues: Ser-53 to Pro-60.
835456	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4593 as residues: Thr-2 to Asn-10, Ser-72 to Lys-78, Gly-95 to

	Thr-101, Phe-134 to Ile-147, Lys-163 to Lys-172, Gln-199 to Glu-206, Ala-212 to Trp-224, Lys-230 to His-236, Arg-238 to Glu-244, Asp-249 to Gly-254, Met-260 to Tyr-266, Arg-272 to Arg-279.
835655	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4594 as residues: Lys-24 to Asn-36, Glu-55 to Asn-60.
836203	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4595 as residues: Pro-43 to Cys-49, Ser-67 to Glu-76, Lys-105 to Cys-110.
836762	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4597 as residues: Arg-252 to Phe-260, Ser-315 to Thr-321.
838459	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4600 as residues: Asp-1 to Lys-14.
839262	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4601 as residues: Lys-29 to Asp-36, Gln-98 to Asp-103, Thr-120 to Lys-142, Thr-158 to Ser-170, Ile-188 to Glu-194, Leu-217 to Gly-223, Tyr-245 to His-252.
839750	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4603 as residues: Gln-27 to Pro-33.
840028	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4604 as residues: Ala-16 to Asn-25, His-32 to Asn-37, Pro-97 to Ser-103, Pro-114 to Ser-120.
840675	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4606 as residues: Pro-134 to Thr-145.
840708	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4607 as residues: Ala-27 to Ser-36.
840848	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4609 as residues: Arg-77 to Asn-82, Glu-119 to Arg-124, Gln-156 to Thr-162, Lys-209 to Lys-215.
840860	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4610 as residues: Ile-27 to Asp-41, Glu-43 to Ala-58, Glu-149 to Glu-154, Lys-158 to Ile-165, Glu-167 to Gly-189, Glu-242 to Phe-247, Arg-259 to Phe-268, Ile-283 to Val-291, Thr-295 to Thr-307, Glu-328 to Asp-338, Asp-372 to Gly-387.
841015	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4611 as residues: Tyr-17 to Thr-29, Lys-35 to Glu-40.
841017	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4612 as residues: Gln-1 to Trp-19.
841030	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4613 as residues: Ser-23 to Gln-30.
841241	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4614 as residues: Asp-41 to Ile-52, Thr-59 to Lys-64, Glu-75 to Asn-89, Thr-99 to Thr-105.
841957	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4615 as residues: Gly-7 to Thr-20, Pro-44 to Thr-49, Gln-55 to Gly-61.
846025	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4616 as residues: Gly-8 to Gly-28, Glu-113 to Asn-122, Arg-144 to Gly-214, Ala-218 to Gly-232, Arg-243 to Glu-248, Glu-356 to Ser-366.

846362	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4617 as residues: His-8 to Gly-18, Phe-66 to Asp-72, Pro-95 to Gly-109, Thr-118 to Ala-126, Gly-128 to Gly-135, Pro-187 to Ser-192, Gly-252 to Arg-258, Asp-270 to Cys-277, Ser-339 to Leu-345, Gly-450 to Ala-468.
846384	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4618 as residues: Gly-3 to Leu-9, Arg-35 to Gly-42, Asp-50 to Thr-55, Ser-98 to Asn-103, Pro-172 to Gly-178, Ser-233 to Pro-243, Ala-289 to Gly-294, Thr-302 to Tyr-309, Glu-341 to Trp-347, Pro-349 to Val-359, Pro-414 to Thr-422, Arg-438 to Glu-443, Gln-507 to Thr-518.
846750	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4619 as residues: Thr-27 to Arg-32, Gly-63 to Gly-71, Ile-95 to Gly-101, Asn-108 to Ser-115.
847598	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4621 as residues: Ser-1 to Thr-27.
848119	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4622 as residues: Pro-5 to Lys-10, Ser-29 to Lys-42, Arg-54 to Arg-66.
848746	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4623 as residues: Pro-61 to Asp-68, Arg-88 to Asp-93.
849084	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4624 as residues: Gly-1 to Pro-8, Ala-48 to Tyr-53, Lys-55 to Arg-62, Glu-67 to Leu-75.
849114	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4625 as residues: Asn-30 to Leu-36, Trp-51 to Phe-56, Pro-62 to Trp-68, Gln-98 to Ser-114, Ile-128 to His-134, Pro-146 to His-151, Asp-153 to Tyr-171, Asp-193 to Trp-198, Pro-222 to Thr-234, Ile-237 to Thr-260, Ile-285 to Gly-296, Arg-301 to Gln-308, Val-311 to Asp-328.
849155	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4627 as residues: Pro-6 to Lys-21, Ala-26 to Val-34, Lys-37 to Ser-46, Phe-73 to Val-81, Pro-86 to Arg-92, Gly-101 to Ser-108, Thr-172 to Pro-178, Met-244 to Lys-255.
849159	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4628 as residues: Thr-28 to Ala-33, Asn-93 to Trp-103, Ile-122 to Pro-130, His-132 to Ile-138.
849244	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4629 as residues: Gln-189 to Glu-196, Glu-206 to Pro-211, Ser-226 to Ile-233, Lys-244 to Ser-253.
849254	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4630 as residues: Ala-5 to Cys-11, Cys-14 to Gly-25, Tyr-32 to Gln-38, Glu-62 to Leu-78, Asp-91 to Tyr-102.
849301	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4631 as residues: Ser-37 to Asp-43, Lys-266 to Ser-272, Glu-304 to Thr-318, Leu-345 to Ser-359, Gln-423 to Ala-439.
849317	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4632 as residues: Pro-42 to Trp-47, Arg-49 to Glu-55, Val-62 to Glu-67, Leu-75 to Leu-90, Leu-102 to Gln-107, Ile-154 to Asp-161.
849332	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4633 as residues: Gln-31 to Ser-38, Gly-60 to Arg-65, Thr-148

	to Thr-155, Cys-180 to Cys-189, Val-224 to Pro-232, Leu-250 to Gln-255.
849422	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4634 as residues: Arg-9 to Arg-14.
849492	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4636 as residues: Ser-5 to Arg-11.
849534	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4637 as residues: Met-8 to His-14.
849565	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4638 as residues: Gly-59 to Ala-67.
849583	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4639 as residues: Pro-13 to Pro-18, Pro-24 to Leu-32, Glu-51 to His-59, Leu-83 to Trp-91, Thr-113 to Gln-120, Pro-133 to Asp-138, Arg-141 to Gln-146, Arg-151 to Ser-156, Tyr-160 to Cys-175, Asn-183 to Asn-188, Trp-221 to Lys-231, Ser-271 to Arg-283, Phe-345 to Gly-350, Ser-381 to Asp-386, Gly-417 to Ser-422, Tyr-462 to Asn-471, Glu-505 to Leu-533, Ser-555 to Asp-561, Thr-566 to His-576, Ser-582 to Gln-587.
849589	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4640 as residues: Ser-16 to Val-25, His-105 to Lys-125, Tyr-147 to Ser-155.
849658	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4641 as residues: Ser-1 to Ser-7.
849666	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4642 as residues: Glu-12 to Met-22.
849679	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4643 as residues: Lys-208 to Asp-214, Glu-278 to Gln-289, Glu-296 to Arg-303, Lys-358 to Leu-364.
849741	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4644 as residues: Arg-30 to His-40.
849783	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4645 as residues: Arg-1 to Pro-14, Gln-47 to Cys-52, Asn-57 to Pro-63, Ser-277 to Lys-282, Leu-326 to Ser-332.
850211	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4646 as residues: Asn-8 to Asn-13.
850254	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4647 as residues: Asn-1 to Arg-6.
850264	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4648 as residues: Ala-33 to Gly-47, Glu-73 to Lys-78, Ser-111 to Asp-126, Gln-139 to Ala-147, Cys-206 to Gly-211, Ser-218 to Asn-225, Leu-237 to Pro-242, Arg-277 to Leu-282, Lys-284 to Lys-291, Ala-357 to Asn-363, Asn-380 to Leu-387, His-475 to Arg-489, Pro-494 to Lys-515.
850273	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4649 as residues: Pro-31 to Lys-38.
850371	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4650 as residues: Lys-32 to Thr-38.
850859	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4651 as residues: Phe-18 to Lys-24, Pro-53 to Lys-75, Tyr-115 to Asp-124, Lys-130 to Leu-137.

851066	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4652 as residues: Pro-6 to Asp-12, Arg-28 to Thr-37, Ile-50 to Lys-59, Ala-63 to Gly-70, Pro-89 to Tyr-96, Ser-103 to Ile-111, Thr-114 to Phe-121, Asp-141 to Pro-147, Arg-162 to Thr-172.
851217	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4653 as residues: Gln-24 to Asp-36, Ser-54 to Thr-65.
852170	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4654 as residues: Leu-13 to Glu-26.
852387	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4655 as residues: Ala-37 to Thr-43.
852812	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4656 as residues: Pro-27 to Pro-33, Asp-92 to Gly-99, Asp-109 to Lys-115, Pro-117 to Trp-130, Phe-208 to Thr-215, Ile-219 to Lys-231, Arg-251 to Asp-257.
853175	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4657 as residues: Gln-21 to Ser-31, Tyr-74 to Gln-81, Leu-115 to Arg-121.
854063	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4659 as residues: Pro-3 to Gly-43.
854073	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4660 as residues: Glu-13 to Val-19, Gln-32 to Met-40, Asp-49 to Arg-54, Leu-74 to Ser-86.
854987	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4661 as residues: Arg-1 to Arg-12.
855130	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4662 as residues: Glu-64 to Tyr-69.
856227	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4663 as residues: Pro-18 to Arg-35, Ala-42 to Gly-54, His-69 to Gln-76, Asp-105 to Arg-110, Arg-121 to Asp-126, Pro-150 to Gln-160.
856243	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4664 as residues: Ala-1 to Ala-8, Lys-78 to Met-86, Arg-126 to Lys-137.
856354	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4665 as residues: Thr-21 to Thr-33.
858178	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4670 as residues: Gly-2 to Gln-8, Lys-68 to Gln-76, Pro-200 to Gly-208, Ser-246 to Gly-257, Gly-280 to Gly-289, Ala-302 to Gly-308, Gly-319 to Asn-331, Leu-352 to Ser-361, Glu-378 to Glu-399, Ala-401 to His-414.
858606	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4671 as residues: Trp-86 to Pro-91.
858894	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4672 as residues: Lys-1 to Ser-9.
858958	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4674 as residues: Pro-19 to Ala-25.
859171	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4675 as residues: Lys-12 to Val-18, Leu-32 to Ser-47, Glu-55 to Asp-66, Glu-94 to Glu-109, Val-115 to Ile-127, Asp-166 to Ser-177, Lys-213 to Glu-225, Glu-241 to Lys-264, Met-322 to Phe-343, Asn-371 to Glu-379, Ala-396 to Ser-407, Ser-415 to Pro-422, Pro-435 to Pro-440,

	Ile-459 to Gln-466, Phe-471 to Phe-476.
859352	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4676 as residues: Thr-11 to Thr-21.
859354	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4677 as residues: Arg-60 to Pro-70, Ser-138 to Ser-145, Cys-157 to Lys-163, Pro-204 to Thr-211, Val-213 to Ser-219, Thr-224 to Thr-230, Pro-297 to Asp-302, Ile-332 to Glu-339, Glu-385 to Ser-390.
859702	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4678 as residues: Lys-7 to Arg-26.
860915	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4679 as residues: Gln-50 to Gly-56.
861209	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4680 as residues: Leu-6 to Thr-15, Pro-85 to Asp-90, Thr-98 to Pro-104.
861534	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4681 as residues: Arg-24 to Ser-30.
861697	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4682 as residues: Gly-8 to Trp-16, Asn-22 to Phe-28, Phe-68 to Arg-75, Ser-93 to Ser-101, Glu-114 to Ile-126, Pro-134 to Phe-143, Gly-165 to Gly-176, Lys-191 to Glu-201, Thr-218 to Lys-227, Tyr-289 to Gln-296.
861826	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4683 as residues: Gly-17 to Pro-23.
861909	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4684 as residues: His-13 to Cys-20, Glu-83 to Cys-93, Pro-131 to Asp-137, Cys-142 to Asn-148, Pro-150 to Gln-155, Pro-160 to Gly-166, Ser-194 to Gly-206, Thr-251 to Ser-258, Gly-267 to Asp-272, Lys-286 to Gly-299, Gln-353 to Leu-366, Thr-368 to Gln-381, Gln-387 to His-397, Glu-404 to Ala-410, Phe-412 to Ala-418, Phe-424 to Ala-439.
862237	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4687 as residues: Cys-20 to Val-27.
862285	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4689 as residues: Ala-26 to Gln-32.
862456	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4691 as residues: Pro-20 to Gly-26, Glu-66 to Trp-76.
862486	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4692 as residues: Cys-36 to Pro-44, His-145 to Asn-151, Asp-186 to Glu-195, Glu-271 to Ile-281, Asp-296 to Pro-302.
863865	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4694 as residues: Gly-1 to Pro-6, Leu-17 to Ala-22, Phe-40 to Ala-45.
863944	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4695 as residues: Glu-102 to Asp-111, Glu-144 to Val-149, Tyr-169 to Lys-180, Arg-239 to Arg-245, Gln-247 to Asp-253, Gly-266 to Asn-278.
864428	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4696 as residues: Thr-1 to Leu-11, Arg-26 to Gly-41, Arg-81 to Asp-91, Asp-144 to Thr-159, Asn-170 to Ala-178, Glu-180 to Lys-191, Cys-249 to Trp-255.
865044	Preferred epitopes include those comprising a sequence shown in SEQ



	ID NO. 4699 as residues: Thr-17 to Gly-34, Pro-66 to Gly-71, Pro-73 to Val-78.
865421	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4701 as residues: Ala-10 to Glu-16.
866287	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4702 as residues: Val-1 to Leu-6.
866300	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4703 as residues: Thr-28 to Trp-35.
867388	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4707 as residues: Ser-39 to Phe-56, Asp-77 to Arg-84, Glu-103 to Lys-129, Lys-134 to Lys-143, Pro-219 to Gly-227, His-289 to Glu-297, Ala-353 to Arg-360, Pro-409 to Tyr-423, His-433 to Thr-441, Phe-445 to Pro-453, Gln-480 to Leu-488, Pro-526 to Thr-540.
867842	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4708 as residues: Leu-38 to His-44, Leu-46 to Gln-55, Leu-65 to Gln-70, Ile-80 to Arg-88.
867923	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4709 as residues: Leu-17 to Leu-23, Gln-51 to Thr-57.
868035	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4710 as residues: Ser-8 to Pro-13, Pro-21 to Ser-33.
868135	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4711 as residues: Glu-27 to Arg-32, Glu-86 to Gly-93, Ala-117 to Glu-127, Glu-148 to Asn-154, Asp-163 to Ser-174.
868173	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4712 as residues: Thr-6 to Asn-14, Pro-19 to Lys-41.
868224	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4713 as residues: Glu-21 to Glu-31, Arg-37 to Ser-45, Asn-47 to Gly-53, Pro-64 to Arg-70, Ser-97 to Tyr-102, Asp-110 to Val-116.
868655	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4714 as residues: Phe-5 to Ser-21, Ser-24 to Ser-32, Ser-40 to Ser-64, Leu-73 to Glu-81, Pro-122 to Leu-130, Glu-186 to Leu-193, Leu-204 to Trp-213, Ser-278 to Ala-285, Glu-376 to Asp-384, Phe-401 to Val-407.
869698	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4715 as residues: Asp-1 to Ser-6, Glu-16 to Ser-26, Lys-66 to Pro-76, Leu-93 to Arg-99, Val-153 to Lys-164, Glu-177 to Asp-183, Ser-188 to Leu-193, Arg-210 to Ser-220, Thr-229 to Ser-244, Pro-283 to Phe-297.
870190	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4716 as residues: Arg-112 to Lys-118, Gln-168 to His-175.
870349	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4717 as residues: Thr-34 to Ala-39, Ser-42 to Arg-47.
870522	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4719 as residues: Asn-32 to Gly-39, Gly-116 to Lys-124.
870896	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4720 as residues: Leu-21 to Gly-30, Arg-41 to Cys-49, Arg-57 to Phe-62.
871071	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4721 as residues: Arg-1 to Cys-13, Lys-26 to Ile-34.

871225	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4722 as residues: Pro-23 to Gly-36, Arg-77 to Ile-84.
871428	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4723 as residues: Gly-6 to Pro-11.
871498	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4724 as residues: Arg-12 to Ser-18.
871732	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4725 as residues: Ser-56 to Thr-62.
871756	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4726 as residues: Ser-31 to Gly-38.
871821	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4727 as residues: Tyr-25 to Lys-30, Lys-36 to Ile-43, Lys-52 to Gln-69, Glu-76 to Asp-81, Arg-92 to Trp-104, Leu-120 to Lys-126, Ser-129 to Ser-135, Ser-139 to Thr-156, Pro-165 to Glu-178, Ser-181 to Thr-186, Tyr-196 to Lys-201, Cys-225 to Lys-230, Glu-234 to Glu-242.
872354	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4729 as residues: Thr-33 to Lys-43, Lys-81 to Ser-100.
872535	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4730 as residues: Ser-33 to Gly-41, Asn-66 to Asp-73, Cys-136 to Gly-141, Met-187 to Thr-193.
872551	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4731 as residues: Cys-1 to Cys-7, Asp-12 to Arg-27, Pro-49 to Tyr-59, Leu-157 to Leu-163, Ser-243 to Thr-248, Thr-349 to Ser-362, Phe-376 to Ser-385.
872640	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4732 as residues: Tyr-1 to Asp-8, Tyr-33 to Gly-39, Glu-57 to Glu-64, Ser-74 to Val-82, Lys-203 to Arg-214, Gln-229 to Pro-235, Gln-310 to Ala-317, Glu-326 to Asn-331, Gly-366 to Asn-372, Leu-392 to Asn-403, Ala-459 to Gln-466, Asp-494 to His-502, Pro-514 to Leu-522, Glu-614 to Leu-621, Asn-642 to His-651.
872802	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4734 as residues: Ser-1 to Gly-8, Arg-30 to Trp-37.
872852	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4735 as residues: Arg-1 to Gln-7, Arg-22 to Arg-28, Gln-93 to Glu-100.
874307	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4739 as residues: Tyr-1 to Glu-6.
874309	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4741 as residues: Ser-2 to Val-13, Lys-59 to Ser-77.
874310	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4742 as residues: Thr-25 to Thr-31.
874320	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4743 as residues: Ser-1 to Ala-7, Ala-26 to Gly-35, Gly-53 to Phe-59, Arg-67 to Arg-84.
874325	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4744 as residues: Arg-1 to Leu-7, Ser-13 to Val-20, Leu-38 to Glu-44, Leu-79 to Gly-84, Thr-92 to Ala-100, Pro-110 to Ser-119.
874327	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4745 as residues: Asp-45 to Thr-51, Leu-55 to Gly-63, Asp-88 to Phe-97, Gly-185 to Trp-200, Gly-214 to Ser-222, Thr-239 to Val-246.

874329	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4747 as residues: Glu-10 to Ala-16, Asp-32 to His-37.
874348	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4750 as residues: Asn-10 to Thr-15.
874349	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4751 as residues: Pro-1 to Ala-7, Asp-38 to Val-54.
874350	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4752 as residues: Ser-35 to Glu-46, Lys-89 to Asp-94.
874358	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4754 as residues: Phe-34 to Lys-45, Asn-122 to Ser-127, Asp-160 to Lys-165.
874362	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4755 as residues: Ile-1 to Ser-12, His-35 to Glu-47, Glu-55 to Ser-71, Gly-74 to Ser-82, Ala-97 to Ser-139, Lys-153 to Arg-166, Arg-171 to Leu-180, Asp-304 to Gly-309, Glu-373 to Glu-378, Ser-495 to Tyr-500.
874368	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4756 as residues: Ala-14 to Pro-20, Thr-26 to Asn-32, Lys-55 to Ala-61.
874370	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4758 as residues: Arg-48 to Tyr-55, Tyr-64 to Gly-76.
874372	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4759 as residues: Ala-1 to Gly-16, Lys-33 to Thr-44, Leu-52 to Asp-57, Gln-69 to Phe-78, Gly-91 to Cys-104.
874396	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4760 as residues: Leu-39 to Ser-44.
874399	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4761 as residues: Pro-36 to Glu-46, Asn-151 to Asn-170, Tyr-175 to Thr-180, Glu-182 to Glu-190, Thr-202 to Glu-212, Arg-238 to Ser-245, Pro-292 to Gly-302.
874401	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4763 as residues: Gly-10 to Gly-19, Lys-44 to Arg-61, Leu-112 to Lys-117.
874403	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4764 as residues: Phe-20 to Lys-27, Lys-66 to Arg-82.
874413	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4768 as residues: Phe-1 to Asp-11.
874414	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4769 as residues: Ser-54 to Gly-59, Asp-63 to Lys-71.
874416	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4770 as residues: Thr-7 to Ser-14, Pro-28 to Asp-36.
874417	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4771 as residues: Tyr-16 to Ala-26, Ser-43 to Asp-54.
874423	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4773 as residues: Lys-1 to Gly-8, Ser-55 to Leu-60.
874427	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4776 as residues: Tyr-64 to Thr-70.
874435	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4780 as residues: Pro-77 to Lys-95.

874437	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4782 as residues: Glu-15 to Glu-29, Ala-43 to Asp-49, Ile-53 to Asp-65, Lys-86 to Pro-94, Val-102 to Gly-121, Asp-160 to Ser-165, Asn-234 to Lys-241, Glu-309 to Leu-321, Lys-368 to Ala-377, Thr-382 to Asp-400, Ser-407 to Asn-415, Asp-417 to Leu-448.
874438	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4783 as residues: Pro-19 to Leu-28, Pro-44 to Ser-60.
874447	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4784 as residues: Pro-1 to His-6.
874449	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4785 as residues: Glu-10 to Gly-20, Lys-41 to Met-46, Leu-60 to Gln-70.
874455	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4787 as residues: Ile-7 to Lys-15.
874459	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4789 as residues: Tyr-1 to Gly-14, Arg-33 to Pro-41, Pro-58 to Asp-66.
874468	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4793 as residues: Thr-10 to Arg-15.
874469	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4794 as residues: Gln-19 to Lys-26.
874470	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4795 as residues: Arg-3 to Gly-18, Pro-73 to Glu-86, Ser-104 to Pro-117, Gln-143 to Arg-150, Asp-158 to Arg-174, Leu-197 to Ser-222, Ala-235 to Glu-256, Arg-296 to Arg-309.
874473	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4797 as residues: Ser-28 to Arg-37, Arg-83 to Gln-97.
874480	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4801 as residues: Lys-2 to Gly-8, Pro-54 to Asn-65.
874482	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4803 as residues: Lys-52 to Asn-60.
874484	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4804 as residues: Lys-24 to Ser-38.
874486	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4806 as residues: Trp-1 to Pro-10.
874492	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4807 as residues: Arg-33 to Cys-44.
874495	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4808 as residues: Asp-17 to Val-23, Asp-35 to Trp-40, Phe-63 to Arg-68, Ala-150 to Thr-156.
874498	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4809 as residues: Ala-37 to Asn-42, Ala-94 to Glu-106.
874499	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4810 as residues: Met-3 to Pro-10, Pro-18 to Arg-23, Pro-62 to Gly-69.
874503	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4811 as residues: Gln-10 to Glu-21, Ser-28 to Arg-33, Glu-107 to Leu-113, Glu-126 to Ser-133.
874504	Preferred epitopes include those comprising a sequence shown in SEQ

	ID NO. 4812 as residues: Pro-53 to Gly-65, Ala-74 to Lys-96, Lys-107 to Lys-116.
874506	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4814 as residues: Ile-81 to Arg-91.
874518	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4816 as residues: Pro-16 to Ser-24, Thr-34 to Pro-39.
874519	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4817 as residues: Asp-19 to Glu-32, Glu-43 to Glu-80.
874522	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4818 as residues: Pro-6 to Pro-12.
874524	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4819 as residues: Asp-16 to Val-21, Leu-33 to Asp-50.
874527	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4820 as residues: Val-1 to Thr-11, Lys-60 to His-73, Met-84 to Gln-99, Thr-119 to Asp-126.
874528	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4821 as residues: Pro-14 to Arg-23, Ala-171 to Ser-178.
874529	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4822 as residues: Pro-7 to Arg-15.
874545	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4830 as residues: Gly-1 to Asp-6.
874550	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4832 as residues: Arg-20 to Lys-28, Leu-40 to Ala-45, Lys-76 to Ser-81, Leu-106 to Lys-111.
874552	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4834 as residues: Ser-70 to Gly-76.
874553	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4835 as residues: Lys-70 to His-78, Lys-149 to Asn-154, Gly-209 to Leu-217, Lys-248 to Val-255, Ile-259 to Arg-264, Arg-280 to Ala-287.
874556	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4836 as residues: Pro-73 to Ala-78, Ala-95 to Trp-106, Ala-108 to Gly-121, Lys-132 to Asn-142, Glu-163 to Arg-173, Ser-189 to Glu-194, Val-213 to Leu-229, Gln-244 to Asn-260.
874559	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4837 as residues: Thr-47 to Val-63, Arg-90 to Tyr-102, Val-179 to Pro-187, Asp-189 to Gln-200.
874560	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4838 as residues: Arg-222 to Gly-236, Ser-242 to Ile-250, Leu-254 to Ser-260, Glu-277 to Ser-283.
874561	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4839 as residues: Arg-29 to Gln-45.
874562	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4840 as residues: Pro-65 to Val-75, Pro-101 to Ala-131, Pro-143 to Cys-155, Ser-167 to Pro-179, Thr-205 to Cys-216, Arg-218 to His-236, Gln-241 to Asp-267.
874563	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4841 as residues: Ala-1 to Lys-8.
874564	Preferred epitopes include those comprising a sequence shown in SEQ

	ID NO. 4842 as residues: Pro-1 to Cys-8, Glu-48 to His-58, Ser-72 to Glu-78.
874567	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4844 as residues: Met-46 to Leu-55, Leu-93 to Lys-115, Leu-169 to Gly-187, Glu-213 to Gly-219, Lys-224 to Glu-229, Ser-294 to Cys-300, Gln-319 to Leu-328, Ser-345 to Asp-350, Pro-380 to Thr-385, Tyr-387 to Val-393.
874570	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4846 as residues: Pro-3 to Phe-14, Arg-16 to Trp-22, Ser-62 to Leu-74, Asp-86 to Ser-92, Gly-102 to Ser-111, Val-113 to Ser-118.
874571	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4847 as residues: Asp-49 to Asp-59, Asp-110 to Ile-115, Trp-137 to Ser-144.
874573	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4848 as residues: Pro-11 to Ala-35, Phe-47 to Glu-54, Glu-78 to Gly-83, Gln-94 to Ser-106, Ser-114 to Val-120.
874577	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4849 as residues: Leu-1 to Leu-6, Lys-26 to Asp-44, His-50 to Gly-58, Ala-102 to Thr-107.
874580	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4851 as residues: Arg-1 to Val-8, Lys-30 to Tyr-36, Tyr-92 to Gly-101, Lys-116 to Lys-125, Asp-140 to Gly-145, Pro-147 to Ser-167, Ser-170 to Ser-191, Ser-193 to Ile-199, Leu-203 to Arg-215, Ser-220 to Glu-231.
874581	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4852 as residues: Leu-1 to His-8, Pro-74 to Pro-84.
874590	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4855 as residues: Arg-1 to Asn-13, Pro-34 to Pro-41, Val-77 to Thr-84.
874592	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4856 as residues: Val-1 to His-27, Gly-33 to Trp-58, Pro-99 to Cys-105.
874594	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4857 as residues: Lys-18 to Gln-27, Leu-41 to Leu-46.
874601	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4859 as residues: Thr-6 to Gly-14, Gly-20 to Ala-26, Pro-31 to Met-37, Arg-49 to Ser-64, Pro-70 to His-79.
874605	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4861 as residues: Val-5 to Gly-11, Ser-43 to Lys-53, Glu-61 to Thr-68, Thr-99 to Ala-104, Tyr-106 to Asp-120, Asn-139 to Leu-148, Thr-169 to Thr-174, Asn-196 to Asn-202, Asn-223 to Glu-231, Glu-241 to Tyr-247, Ser-265 to Thr-270, Thr-277 to Cys-286, Leu-292 to Asp-298, Asn-347 to Thr-352, Thr-361 to Gly-366, Asn-373 to Thr-383.
874607	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4862 as residues: Pro-1 to Arg-10.
874608	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4863 as residues: Pro-3 to Arg-8, Gly-34 to Thr-53, Asp-60 to Ser-65, Phe-76 to Lys-81.
874609	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4864 as residues: Arg-6 to Arg-13, Phe-25 to Asn-32, Phe-47 to

	Glu-56, Lys-108 to Ala-122.
874610	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4865 as residues: Pro-31 to Trp-39, Pro-101 to Lys-110, Tyr-130 to Ala-137, Val-145 to Lys-154, Pro-174 to Gly-179, Phe-194 to Asn-202, Glu-224 to Gly-240, Thr-259 to Gln-264, Arg-287 to Ser-293, Cys-301 to Gln-307.
874611	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4866 as residues: Lys-1 to Gly-6, Asp-13 to Glu-27.
874615	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4869 as residues: Pro-13 to Cys-19.
874618	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4870 as residues: Arg-10 to Cys-15, Phe-30 to Pro-36, Arg-53 to Ser-59, Thr-66 to Ser-79.
874619	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4871 as residues: Ala-1 to Pro-7.
874621	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4873 as residues: Glu-4 to Gly-12, Thr-21 to Gln-27, Pro-40 to Ser-47, Pro-50 to Ser-61, Val-101 to Cys-107, Lys-138 to Gly-147, Gln-150 to Tyr-156, Lys-169 to Thr-174.
874622	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4874 as residues: Gln-31 to Lys-39, His-55 to Asp-60.
874623	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4875 as residues: Arg-7 to His-24, Pro-27 to Gly-33.
874624	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4876 as residues: Gln-12 to Ser-22.
874626	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4878 as residues: Leu-4 to Gly-11, Pro-60 to Gln-65.
874628	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4879 as residues: Pro-13 to Thr-20, His-24 to Gly-34, Glu-36 to His-42.
874631	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4881 as residues: Lys-14 to Glu-23, Glu-30 to Ser-43, Ser-45 to His-54, Thr-66 to Tyr-71, Pro-75 to Asp-80, Ile-98 to Thr-120, Glu-125 to Lys-133, Leu-146 to Ala-152, Ala-170 to Ile-176, Asp-180 to Cys-200.
874632	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4882 as residues: His-45 to Gly-50.
874635	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4883 as residues: Pro-1 to Pro-7, Leu-19 to Gly-26, Glu-72 to Asp-78, Lys-93 to Glu-103, Gln-152 to Gly-159, Gln-181 to Asp-190, Phe-232 to Val-237, Asn-282 to Thr-287, Pro-289 to Pro-295, His-341 to Asp-351, Cys-378 to Glu-383, Gln-448 to Gly-453, Ser-518 to His-524, Pro-536 to Glu-541.
874636	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4884 as residues: Glu-1 to Tyr-6, Pro-39 to Asp-46.
874639	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4886 as residues: Pro-7 to Gly-29, Ser-36 to Ala-41, Pro-43 to Asp-54, Pro-59 to Leu-64, Gln-70 to Ile-75, Glu-85 to Lys-94.
874642	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4888 as residues: His-8 to Gly-18, Gly-26 to Asp-38.

874644	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4889 as residues: Ser-4 to Leu-10, Thr-25 to Gly-35.
874645	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4890 as residues: Glu-69 to Thr-75.
874650	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4892 as residues: Glu-2 to Glu-14.
874651	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4893 as residues: Arg-1 to His-9.
874652	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4894 as residues: Ser-40 to Asn-45.
874653	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4895 as residues: Thr-1 to Ser-10, Arg-24 to Trp-51, Leu-62 to Gly-67, Pro-72 to Gly-81, Pro-98 to Gly-103.
874655	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4897 as residues: Glu-9 to Cys-14, Ser-38 to Ser-47, Tyr-52 to Lys-61, His-68 to Lys-78, Lys-93 to Gly-101.
874660	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4902 as residues: Leu-13 to Glu-18.
874665	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4904 as residues: Arg-9 to Arg-18, Leu-28 to Phe-36, Pro-49 to Arg-56, His-85 to Asn-103.
874667	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4905 as residues: Leu-47 to Thr-53, Ala-60 to Ser-66.
874670	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4906 as residues: Lys-1 to Leu-6, Pro-9 to Gly-17, Tyr-19 to Glu-25, Arg-30 to Leu-39.
874671	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4907 as residues: Val-5 to Ile-10, Glu-26 to Asp-35, Pro-70 to Pro-80, Tyr-90 to Glu-96.
874673	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4909 as residues: Ser-53 to Ser-63.
874675	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4910 as residues: Ser-33 to Ala-48.
874678	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4911 as residues: Lys-1 to Ser-12.
874679	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4912 as residues: Arg-1 to Glu-7, Leu-21 to Lys-32, His-56 to Cys-64.
874680	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4913 as residues: Glu-8 to Arg-14, Ile-49 to His-59, Leu-86 to Cys-94.
874683	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4915 as residues: Gly-22 to Thr-28, Glu-43 to Val-48, Ser-64 to Leu-71, Phe-106 to Val-111.
874688	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4917 as residues: Ser-10 to Glu-18, Leu-45 to Arg-54.
874689	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4918 as residues: Asn-13 to Gln-19, Lys-56 to Phe-61, Leu-83 to Ala-90.



874695	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4919 as residues: Leu-2 to Ser-12, Pro-125 to Asp-133.
874696	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4920 as residues: Asn-58 to Ser-66.
874699	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4922 as residues: Glu-1 to Ser-7.
874700	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4923 as residues: Gly-10 to Ile-16, Ile-50 to Ser-55.
874701	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4924 as residues: Asn-9 to Gly-14, Glu-17 to His-22.
874702	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4925 as residues: Pro-3 to Arg-20, Pro-24 to Arg-34.
874703	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4926 as residues: Ser-1 to Ser-7, His-35 to Gln-48, Ser-54 to Asn-59, Lys-69 to Met-74.
874708	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4929 as residues: Ala-145 to Gly-152, Val-177 to Gly-185.
874709	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4930 as residues: Ala-13 to Lys-22, Glu-31 to Arg-49, Ser-59 to Asn-65.
874710	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4931 as residues: Glu-1 to Arg-7, Leu-23 to Arg-39, Lys-46 to Asn-52, Pro-59 to Ser-67.
874711	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4932 as residues: Ile-37 to Ala-45, Glu-56 to Pro-62.
874713	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4933 as residues: His-47 to Gly-53, Ser-163 to Ser-169, Pro-276 to Lys-282.
874714	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4934 as residues: Ser-10 to Glu-18.
874715	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4935 as residues: Ser-13 to Leu-18.
874718	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4937 as residues: Gly-43 to His-54, Phe-126 to Cys-132, Pro-140 to Gln-150, Lys-159 to Ala-164, Ser-187 to Gly-193, Pro-212 to Gly-227.
874719	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4938 as residues: Gly-1 to Pro-7, Asp-45 to Asp-50, Lys-82 to Leu-89, Asp-97 to His-102, Thr-118 to Ser-126, Phe-128 to Asp-136, Gly-142 to His-148, Ser-212 to Gln-217, Arg-237 to Glu-244, Arg-269 to Glu-276, Asp-279 to Tyr-284.
874720	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4939 as residues: Glu-18 to Leu-28, Gly-49 to Gly-56, Ser-68 to Arg-74.
874724	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4941 as residues: Asp-7 to Glu-12.
874726	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4943 as residues: Ser-55 to Phe-60.
874732	Preferred epitopes include those comprising a sequence shown in SEQ

	ID NO. 4946 as residues: Val-10 to Gly-15, Ser-98 to Thr-105.
874737	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4947 as residues: Ala-36 to His-45.
874741	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4948 as residues: Gln-11 to His-19, Val-30 to Ile-36, Pro-63 to Ser-69, Gly-78 to Ser-83, Ser-92 to Tyr-97, Gln-155 to Glu-161, Gly-237 to Thr-244.
874744	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4949 as residues: Glu-1 to Phe-12, Ser-47 to Gly-52.
874746	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4951 as residues: Asn-34 to Ser-39.
874749	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4954 as residues: Asp-1 to Gly-17.
874750	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4955 as residues: Gly-4 to Lys-9.
874751	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4956 as residues: His-42 to Glu-47.
874752	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4957 as residues: Ile-11 to Gly-17, Gln-26 to Val-32, Gln-41 to Asp-52.
874756	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4961 as residues: Ser-1 to His-6.
874757	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4962 as residues: Thr-33 to Phe-38.
874760	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4965 as residues: Gly-1 to Ser-8, Ser-23 to Asn-37.
874763	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4966 as residues: Trp-33 to Gln-40, Cys-64 to Ala-70, Ser-148 to Tyr-160.
874764	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4967 as residues: Lys-1 to Gln-19.
874765	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4968 as residues: Thr-50 to Gln-59, Ser-62 to Lys-68.
874766	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4969 as residues: Pro-1 to Gly-21, Leu-37 to Pro-42.
874767	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4970 as residues: Lys-30 to Ala-41, Pro-50 to Asn-56, Glu-141 to Pro-151, Ser-175 to Ser-189.
874769	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4972 as residues: Lys-13 to Glu-22, Glu-76 to Trp-89, Thr-112 to Gly-120, Arg-141 to Gly-146, Thr-178 to Val-185, Val-212 to Arg-223, Pro-225 to Gln-231, Asn-238 to Ala-244, Pro-281 to Glu-287.
874772	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4973 as residues: Gln-44 to Arg-55, Pro-61 to Ala-66.
874774	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4975 as residues: Pro-19 to Pro-34, Leu-46 to Phe-62.
874776	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4977 as residues: Pro-7 to Cys-15, Arg-31 to Glu-42, Ala-47 to Ser-58.

874778	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4978 as residues: Arg-1 to Gly-6.
874779	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4979 as residues: Ser-23 to Glu-31, Asp-46 to Pro-53.
874783	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4982 as residues: Gly-1 to Asp-12, Gly-29 to Gly-37, Gly-73 to Lys-99.
874784	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4983 as residues: Pro-12 to Gly-18.
874785	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4984 as residues: Lys-24 to Lys-36.
874787	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4986 as residues: Thr-5 to Gly-11, Arg-63 to Lys-73, Gln-92 to Glu-98, Ala-106 to Gly-112.
874788	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4987 as residues: Pro-53 to Asn-59.
874790	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4988 as residues: Ser-4 to Thr-9, Gly-17 to Pro-22, Gly-32 to Pro-37.
874791	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4989 as residues: Gly-1 to Ser-6, Pro-20 to Arg-27.
874793	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4990 as residues: Pro-6 to Ala-12, Pro-18 to Thr-28, Pro-31 to Arg-37, Pro-53 to Ile-60.
874795	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4991 as residues: Pro-58 to Leu-72.
874796	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4992 as residues: Thr-4 to Arg-11, Pro-30 to Gly-43, Glu-48 to Glu-56, Met-86 to Ser-92.
874797	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4993 as residues: Gly-52 to Thr-60, Arg-94 to Glu-100.
874800	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4994 as residues: Thr-14 to Tyr-25.
874802	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4996 as residues: Lys-17 to Leu-23.
874803	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 4997 as residues: Glu-7 to Arg-15, Pro-23 to Arg-36, Pro-79 to Ser-96, Ser-119 to Gly-125.
874813	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5004 as residues: Arg-18 to Arg-23, Glu-35 to Asp-50, Ser-67 to Gln-74, Asp-78 to Ser-93.
874815	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5005 as residues: His-38 to Val-46, Ser-97 to Ser-103, Ser-106 to Leu-111, His-191 to Gly-196, Leu-223 to Gly-239, Pro-245 to Ala-250.
874818	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5007 as residues: Tyr-46 to Gly-51.
874819	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5008 as residues: Pro-33 to Gly-40.

874820	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5009 as residues: Ile-18 to Gly-30, Leu-33 to Asn-48.
874821	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5010 as residues: Thr-8 to Ser-16.
874822	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5011 as residues: Asn-9 to Phe-14, Glu-63 to Thr-68.
874827	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5012 as residues: Pro-19 to Ser-24, Val-28 to Glu-34.
874828	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5013 as residues: Lys-17 to Gly-28, Thr-62 to Thr-69, Val-88 to Arg-101, Gln-106 to Pro-112, Arg-127 to Cys-132, Gly-158 to Leu-163.
874830	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5015 as residues: Arg-53 to Thr-58.
874835	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5017 as residues: Gly-1 to Ser-11; Ser-16 to Ala-26, Thr-28 to Ser-36, Gln-53 to Trp-59, Lys-72 to Thr-100, Asp-137 to Cys-143.
874836	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5018 as residues: Leu-12 to Asn-17, Phe-25 to Cys-33, Gln-50 to Ser-60, Glu-63 to Pro-68, Pro-83 to Pro-95.
874837	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5019 as residues: Val-35 to Thr-41.
874844	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5021 as residues: Pro-19 to Phe-26, Pro-29 to Gly-34, Pro-50 to Ser-55, Gly-67 to Lys-73.
874845	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5022 as residues: Asn-1 to Leu-6, Phe-14 to Gly-20.
874847	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5023 as residues: Lys-16 to Thr-22, Glu-36 to Arg-42.
874851	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5025 as residues: Asp-58 to Gly-65, Asp-132 to Cys-147, Pro-149 to Pro-157, Pro-218 to Leu-224.
874852	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5026 as residues: Ala-16 to Trp-21.
874854	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5027 as residues: Gly-2 to Glu-8, Met-21 to Trp-26.
874856	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5029 as residues: His-15 to Asp-20, Lys-27 to Asn-33.
874857	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5030 as residues: Lys-35 to Arg-44, Lys-53 to Val-64, Glu-76 to Val-82, Leu-109 to Lys-118.
874864	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5033 as residues: Leu-40 to Cys-51, Glu-80 to Thr-89, Pro-124 to Ser-132, Cys-153 to Cys-160, Glu-203 to Asp-209, Ala-226 to Arg-241.
874865	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5034 as residues: His-1 to Lys-7.
874871	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5038 as residues: Gly-1 to Ser-10, Ser-13 to Ile-19, Arg-30 to Leu-37, Pro-39 to Asp-48, Pro-140 to Cys-148, Gln-154 to Cys-162,

	Pro-164 to Ser-170.
874873	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5039 as residues: Cys-6 to Ala-12, Pro-14 to Pro-22, Arg-48 to Arg-53, Ile-75 to Thr-85, Glu-97 to Gln-102, Arg-130 to Arg-135, Ser-147 to Val-152, Lys-175 to Thr-185, Phe-189 to Met-194, Gly-213 to Ser-220, Glu-262 to Leu-268.
874879	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5043 as residues: Glu-1 to Gly-15, His-27 to Thr-39, Gly-43 to Ile-49.
874880	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5044 as residues: Pro-62 to Val-70, Lys-103 to Ile-108.
874881	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5045 as residues: Asp-1 to Gly-9.
874885	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5046 as residues: Lys-49 to Gln-55, Glu-83 to Lys-90, Gly-158 to Gly-164, Lys-185 to Gly-192.
874886	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5047 as residues: Pro-10 to Gly-16, His-128 to Gly-134, His-154 to Asp-160, Leu-182 to Leu-187.
874888	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5048 as residues: Pro-15 to Met-27, Thr-106 to His-118, Arg-128 to Arg-139, Val-248 to Arg-254.
874889	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5049 as residues: Pro-7 to Ile-14, Ser-17 to Gln-22.
874890	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5050 as residues: Gly-25 to Ser-31, Trp-34 to Cys-41.
874891	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5051 as residues: Glu-26 to Ser-33, Thr-82 to Phe-90, Met-107 to Asn-114, Thr-125 to Glu-131, His-175 to Asp-180.
874892	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5052 as residues: Arg-1 to Lys-29, Ile-36 to Lys-47, Lys-52 to Gly-83, Pro-89 to Asp-111.
874893	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5053 as residues: Arg-17 to Ile-22.
874896	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5056 as residues: Arg-21 to Lys-26, Pro-37 to Cys-45.
874897	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5057 as residues: Asn-13 to Ala-27, Pro-33 to Lys-42, Asp-61 to Ser-74, Leu-85 to Lys-102.
874898	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5058 as residues: Pro-1 to Leu-9.
874900	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5060 as residues: Lys-3 to Asp-12, Gln-36 to Tyr-47.
874903	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5062 as residues: Pro-9 to Trp-21, Lys-54 to Gln-61, Lys-75 to Phe-87, Glu-97 to Pro-104, Leu-200 to Val-205, Pro-208 to Gly-218, Thr-263 to Leu-278.
874905	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5064 as residues: Tyr-94 to Ile-99.

874906	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5065 as residues: Glu-4 to Pro-11.
874907	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5066 as residues: Gln-1 to Lys-10, Thr-17 to Asn-32, Lys-54 to Lys-65.
874908	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5067 as residues: Ile-1 to Leu-6, Leu-17 to Ala-23, Ile-27 to Thr-33, Asn-40 to Leu-45.
874909	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5068 as residues: Pro-18 to Ser-28, Ser-55 to Thr-64, Asn-90 to Lys-95, Asn-128 to Ile-159, Pro-171 to Gly-178, Pro-186 to Lys-192.
874917	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5071 as residues: Arg-37 to Thr-42, Pro-50 to Gly-68, Pro-70 to Leu-78, Lys-84 to Lys-89, Asn-95 to Val-105, Asp-117 to Lys-126.
874924	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5072 as residues: Leu-8 to Asn-18, Gly-31 to Ala-39.
874925	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5073 as residues: Ser-3 to Arg-9, Gln-24 to Gly-29.
874926	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5074 as residues: Gly-1 to Pro-22.
874928	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5076 as residues: Pro-15 to Gly-23, Ser-27 to Lys-33, Glu-41 to Lys-46, Pro-48 to Asp-55.
874937	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5084 as residues: Ser-15 to Ser-20.
874938	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5085 as residues: Ser-12 to Asp-18, His-43 to Gly-51.
874939	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5086 as residues: Ser-12 to Gln-21.
874946	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5088 as residues: Ser-1 to Lys-6, Lys-16 to Glu-24, Asn-34 to Lys-47.
874957	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5090 as residues: Ala-12 to Asn-20, Pro-23 to Asn-28, Phe-47 to Val-52, Lys-88 to Gly-93, Tyr-113 to Asn-123, Val-211 to Lys-216.
874958	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5091 as residues: Cys-2 to Leu-9, Pro-37 to Gly-42, Ala-50 to Gly-71, Asn-83 to Ala-94, Leu-109 to Leu-115, Phe-156 to Gly-164, Lys-234 to His-249, Glu-267 to Gly-281, Asn-335 to Asp-356, Glu-378 to Ser-385, Gln-402 to Gly-411, Trp-469 to Lys-477, Glu-481 to Gly-486.
874962	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5092 as residues: Asp-1 to Ser-11, Ser-29 to Ser-37, Gln-100 to Arg-112, Leu-123 to Trp-148, Lys-237 to Glu-242, Ala-261 to Asp-266, Asp-279 to Ser-300, Thr-374 to Glu-384, Thr-426 to Thr-432, Glu-443 to Val-449.
874965	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5093 as residues: Asn-13 to His-23, Ser-43 to Gln-56, Val-60 to Glu-65, Pro-67 to Gly-103, Asn-105 to Asp-110.
874970	Preferred epitopes include those comprising a sequence shown in SEQ

	ID NO. 5094 as residues: Pro-3 to Lys-17, Thr-37 to Gly-47.
874972	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5095 as residues: Thr-124 to Thr-129, Gly-136 to Phe-142, Asp-164 to His-171, Asp-180 to Tyr-194.
874973	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5096 as residues: Trp-48 to Arg-56, Pro-68 to Ala-74.
874974	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5097 as residues: Arg-1 to Gly-6, Pro-14 to Ala-26, Ala-42 to Lys-47, Pro-66 to Val-82.
874975	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5098 as residues: Ala-18 to Glu-24, Gln-26 to Gln-31.
874976	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5099 as residues: Lys-13 to Ser-19, Pro-33 to Gly-41.
874981	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5104 as residues: Arg-11 to Arg-20.
874983	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5105 as residues: Lys-1 to Thr-9, Ala-43 to Asp-49, Asp-66 to Arg-72, Gln-80 to Asp-87, Arg-97 to Lys-104, Ser-111 to Glu-117, Phe-150 to Phe-155, Phe-165 to Ala-177, Tyr-219 to Asn-224, Gln-235 to Thr-242, Tyr-244 to Thr-251, Arg-267 to Thr-276, Thr-299 to Ile-306, Pro-318 to Glu-348, Gly-352 to Leu-370.
874984	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5106 as residues: Thr-40 to Glu-46, Lys-51 to Asn-63.
874991	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5110 as residues: Ser-34 to Gln-40, Met-43 to Asp-70.
874993	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5112 as residues: Thr-6 to Gly-12.
874994	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5113 as residues: Val-3 to Lys-9.
874995	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5114 as residues: Arg-1 to Glu-6, Pro-21 to Thr-27, Lys-41 to Thr-48, Gly-202 to Ile-208, Glu-216 to Lys-221, Glu-241 to Lys-247, Glu-261 to Leu-267, Pro-269 to Glu-277, Gln-319 to Lys-326.
874996	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5115 as residues: Glu-1 to Gly-12, Tyr-15 to Pro-22, Asp-36 to Thr-48.
874997	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5116 as residues: Ile-3 to Lys-9, Ser-31 to Trp-40.
874999	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5118 as residues: Lys-11 to Gln-16.
875002	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5120 as residues: Lys-6 to His-16.
875004	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5122 as residues: Pro-5 to Val-14, Asn-24 to Tyr-35, Ser-70 to Val-77, Ser-81 to Asp-99, Ser-121 to Phe-127, Thr-137 to Lys-146, Lys-158 to Ser-164, Phe-185 to Gly-192, Asp-212 to Gln-221.
875005	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5123 as residues: Glu-1 to Ser-14.
875008	Preferred epitopes include those comprising a sequence shown in SEQ

	ID NO. 5125 as residues: Arg-1 to Glu-6, Val-14 to Asp-21.
875009	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5126 as residues: Val-30 to Arg-37, Glu-57 to Thr-63, Leu-66 to Arg-72.
875017	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5128 as residues: Ser-28 to Leu-34, Glu-55 to Gln-62.
875024	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5132 as residues: Tyr-19 to Tyr-24.
875027	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5134 as residues: Thr-46 to Gly-51.
875029	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5135 as residues: Ser-23 to Gly-35.
875034	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5137 as residues: Ser-42 to Trp-53, Glu-71 to Ala-78.
875036	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5139 as residues: Ile-20 to Gly-40.
875037	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5140 as residues: Trp-23 to Gly-28.
875044	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5143 as residues: Gln-23 to Cys-42, Arg-66 to Asn-73.
875045	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5144 as residues: Glu-10 to Leu-25, Lys-27 to Cys-57.
875046	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5145 as residues: Phe-14 to Phe-19.
875049	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5148 as residues: Thr-5 to Lys-12.
875053	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5149 as residues: Ser-16 to Phe-31.
875056	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5151 as residues: Pro-14 to Trp-19.
875058	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5152 as residues: Pro-3 to Gly-20, Gly-24 to Thr-29, Arg-46 to Asn-57, Leu-72 to Phe-78, Glu-81 to Gln-86, Ile-103 to Gln-117, Leu-127 to Ile-142, Asn-144 to Ser-151, Arg-156 to His-166.
875060	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5154 as residues: Pro-14 to Ser-20, Pro-41 to Arg-46, Asp-70 to His-78.
875062	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5156 as residues: Cys-10 to Tyr-16.
875063	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5157 as residues: Ala-18 to Pro-28.
875066	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5158 as residues: Glu-144 to Leu-152, Glu-170 to Asp-179, Gln-225 to Asp-239, Gly-259 to Ala-265.
875067	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5159 as residues: Arg-7 to Pro-16, Pro-37 to Ile-44, Thr-50 to Tyr-72, Pro-88 to Phe-94, Ala-107 to Pro-115.
875068	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5160 as residues: Thr-12 to Trp-23.



875070	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5161 as residues: Asp-17 to Asp-27, Pro-34 to Tyr-40, Glu-52 to Glu-57.
875080	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5163 as residues: Val-30 to Met-37, Glu-39 to Gly-45.
875088	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5165 as residues: Thr-1 to Tyr-8, Gln-27 to Glu-33, Gly-42 to Ser-49, Arg-56 to Lys-81, Cys-97 to Lys-104, His-114 to Ser-133, Gln-139 to Lys-146, Arg-165 to Glu-173, Asp-180 to Lys-188, Arg-196 to Glu-201.
875092	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5166 as residues: Thr-9 to Asp-17, Leu-70 to Lys-95, Asp-115 to Leu-124.
875093	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5167 as residues: Gly-2 to Gly-7, Glu-9 to Gln-16, Cys-24 to Gly-30, Ala-35 to Ala-45, Ala-55 to Ala-60, Cys-79 to Leu-90, Asp-95 to Asp-103.
875094	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5168 as residues: His-80 to Glu-87.
875100	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5170 as residues: Thr-18 to Glu-23.
875102	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5172 as residues: Ser-10 to Gly-16, Pro-24 to Arg-35, Lys-39 to Ala-51.
875103	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5173 as residues: Arg-35 to Ala-41.
875105	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5174 as residues: Phe-70 to His-75.
875106	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5175 as residues: His-45 to Gly-55.
875113	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5177 as residues: Thr-27 to Thr-53.
875114	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5178 as residues: Gly-2 to Arg-7.
875118	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5180 as residues: Pro-21 to Leu-26, Val-62 to Phe-70, Pro-81 to Asp-89.
875121	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5181 as residues: Phe-19 to Leu-36, Glu-38 to Pro-45.
875123	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5182 as residues: Ser-44 to Pro-49, Arg-54 to Gly-64, Leu-94 to Asp-100, Ser-107 to Gly-113, Lys-143 to Tyr-150.
875126	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5185 as residues: His-22 to Ser-27, Cys-34 to Ser-40.
875133	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5187 as residues: His-1 to Gly-9, Gly-19 to Pro-28, Pro-36 to Tyr-42, Gly-44 to Gly-65.
875134	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5188 as residues: Gly-10 to Lys-19, Met-21 to Pro-32.

875143	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5190 as residues: Arg-17 to Ser-23.
875144	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5191 as residues: Asn-14 to Thr-19.
875151	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5193 as residues: Arg-10 to Trp-15, Lys-90 to Ile-95, Asn-103 to Ile-109, Asn-131 to Leu-137, Asn-153 to Arg-163.
875160	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5197 as residues: Val-20 to Asn-27.
875165	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5198 as residues: Thr-5 to Gly-13, Cys-24 to Lys-33.
875177	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5200 as residues: Ala-37 to Asp-44.
875182	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5202 as residues: Pro-25 to Ser-33, Gln-113 to Ser-122, Trp-147 to Tyr-158, Ser-187 to Ala-198, His-201 to Gly-209, Pro-223 to Gly-228, Glu-233 to Gly-238.
875194	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5205 as residues: Ser-16 to Ser-21, Gln-34 to Thr-41.
875200	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5208 as residues: Gln-12 to Cys-19.
875203	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5209 as residues: Arg-1 to Trp-6, Pro-9 to Leu-14.
875205	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5210 as residues: Leu-22 to Ala-27, Ser-31 to Ser-36, Pro-77 to Cys-83.
875206	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5211 as residues: Pro-69 to Pro-75.
875208	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5212 as residues: Asn-25 to Gly-30, Asn-34 to Asn-39.
875209	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5213 as residues: Asn-11 to Ser-18, His-20 to Arg-26, Val-31 to Trp-41.
875210	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5214 as residues: Leu-37 to Thr-52.
875214	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5216 as residues: Ala-7 to Leu-33.
875215	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5217 as residues: Gln-18 to Leu-29, Asp-52 to Ile-57.
875223	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5218 as residues: Thr-2 to Gln-7.
875226	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5219 as residues: Arg-1 to Gln-7, Lys-21 to Gln-31, Leu-41 to Ser-84, Asp-87 to Arg-98, Leu-102 to Lys-115, Leu-129 to Lys-139.
875228	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5220 as residues: Ser-1 to His-10, Pro-84 to Arg-98, His-108 to Asn-113.
875240	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5224 as residues: Ser-31 to Arg-43.

875246	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5225 as residues: Phe-29 to Leu-37.
875261	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5228 as residues: Ser-10 to Asp-24.
875270	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5230 as residues: Ser-1 to Ser-11, Gln-64 to Gln-69, Arg-117 to Pro-128, Pro-135 to Asp-140, Gly-147 to Arg-160, Lys-168 to Val-173, Asn-181 to Lys-191, Glu-200 to Gly-205, Gly-215 to Lys-224.
875271	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5231 as residues: Phe-12 to Lys-17.
875275	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5232 as residues: Pro-9 to Gly-20.
875277	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5234 as residues: Arg-6 to Ser-18.
875278	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5235 as residues: Thr-45 to Lys-50.
875282	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5239 as residues: Thr-14 to Lys-31.
875287	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5240 as residues: Lys-15 to Trp-31, Val-44 to Cys-51.
875288	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5241 as residues: Pro-28 to Gly-39, Ser-42 to Ser-50, Arg-61 to Arg-70, Gln-75 to Gly-86.
875296	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5243 as residues: Glu-26 to Ala-32, Thr-81 to Ser-90.
875303	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5244 as residues: Glu-2 to Met-9, Asp-17 to Asn-22, Leu-27 to Val-35.
875306	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5247 as residues: Thr-17 to Phe-22.
875307	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5248 as residues: Pro-1 to Tyr-22.
875308	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5249 as residues: Pro-36 to Pro-41.
875309	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5250 as residues: Pro-1 to Ala-9, Gly-42 to Gln-51.
875312	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5253 as residues: Leu-7 to Tyr-14, Glu-41 to Leu-49.
875313	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5254 as residues: Gln-23 to Leu-34, Asp-45 to Arg-60.
875316	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5255 as residues: Asn-25 to Tyr-31.
875319	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5256 as residues: Asp-10 to Lys-16, Lys-35 to Asn-41, Tyr-55 to Leu-62, Glu-145 to Thr-153, Ser-169 to Lys-175, Thr-184 to His-192, Gly-224 to Trp-234, Ala-251 to Leu-256, Glu-276 to Asp-281.
875336	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5261 as residues: Tyr-3 to Leu-10.
875338	Preferred epitopes include those comprising a sequence shown in SEQ

	ID NO. 5262 as residues: Pro-9 to Ile-14, Glu-81 to Gln-90.
875346	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5264 as residues: Gly-29 to Arg-44.
875347	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5265 as residues: Ile-3 to Ser-14, Ala-32 to Ser-44, Ser-60 to Leu-67.
875360	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5268 as residues: Pro-14 to Leu-19, Ile-37 to Ala-46, Ser-58 to Asn-65, Pro-71 to Gly-77.
875364	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5269 as residues: Val-38 to Phe-47, Asn-64 to Phe-69.
875367	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5271 as residues: Gly-14 to Leu-21, Asn-31 to Met-37.
875371	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5272 as residues: Pro-12 to Glu-23, Lys-29 to Pro-34, Pro-54 to Leu-66.
875372	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5273 as residues: Ala-7 to Arg-12.
875373	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5274 as residues: Tyr-54 to Cys-61, Asn-73 to Pro-78, Pro-84 to Asn-93, Gln-99 to Asp-105.
875378	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5276 as residues: Leu-42 to Lys-53, Cys-100 to Asn-110, Pro-137 to Gly-144, Pro-190 to Ala-205.
875379	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5277 as residues: Asp-5 to Ala-10, Ala-19 to Ile-25, Val-39 to Ser-44, Gln-74 to Cys-90, Leu-94 to Glu-99, Leu-108 to Phe-116.
875381	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5279 as residues: Cys-46 to Leu-51.
875382	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5280 as residues: Pro-11 to Thr-16, Pro-23 to Gly-33, Ala-51 to Arg-61.
875384	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5281 as residues: Gln-15 to Gly-28, Asp-83 to Tyr-92.
875385	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5282 as residues: Leu-3 to Asp-8, Gln-30 to His-36.
875388	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5283 as residues: Thr-2 to Ser-9, Pro-23 to Arg-30.
875391	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5284 as residues: Lys-1 to Arg-10, Lys-53 to Tyr-62.
875397	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5285 as residues: Arg-7 to Gly-29, Arg-37 to Glu-47, Asp-78 to Thr-83, Gly-173 to Val-180, Glu-188 to Glu-202, Pro-208 to Thr-216, Thr-227 to Glu-242, Arg-250 to Gly-281, Lys-288 to Thr-296, Glu-301 to Arg-311, Ala-313 to Lys-318, Lys-357 to Thr-367, Pro-376 to Ser-387, Pro-416 to Lys-428, Pro-486 to Thr-491, Ser-497 to Arg-516, Lys-522 to Lys-532, Arg-537 to Met-557.
875402	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5286 as residues: Asn-1 to Thr-15.

875406	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5288 as residues: Pro-5 to Ala-19.
875410	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5289 as residues: Ala-4 to Pro-14, Pro-23 to Thr-28, Thr-40 to Gln-45, Tyr-60 to Gln-69, Pro-88 to Leu-93, Glu-108 to Ala-113, Val-119 to Gly-131, Arg-146 to Arg-155, Ala-164 to Lys-171, Thr-190 to Met-201.
875415	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5290 as residues: Arg-18 to Trp-23, Gly-25 to Gly-32, Lys-34 to Arg-42, Gly-52 to Thr-59, Ala-86 to Lys-92.
875416	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5291 as residues: Lys-9 to Gly-37.
875417	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5292 as residues: Glu-2 to Cys-14.
875419	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5294 as residues: Thr-2 to Tyr-11.
875423	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5295 as residues: Lys-13 to Ile-24, Phe-28 to Val-35.
875428	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5298 as residues: Gly-2 to Thr-7, Gly-20 to Thr-29, Asn-69 to Arg-77.
875429	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5299 as residues: Phe-4 to Pro-9, Pro-13 to Gln-18.
875433	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5300 as residues: Lys-78 to Met-83.
875434	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5301 as residues: Thr-34 to Glu-39.
875437	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5302 as residues: Glu-1 to Gln-7.
875440	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5303 as residues: Arg-11 to Met-17, Ile-66 to Trp-71, Asp-91 to Leu-97, Ala-102 to Lys-111, Trp-113 to Glu-120, Pro-132 to Asn-141, Thr-144 to Glu-153, Glu-159 to Glu-172, Pro-177 to Lys-192.
875441	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5304 as residues: Cys-28 to Cys-34.
875442	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5305 as residues: Pro-18 to Lys-23.
875446	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5306 as residues: Pro-8 to Phe-18.
875452	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5307 as residues: Ala-6 to Cys-17.
875458	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5308 as residues: Glu-40 to Glu-46, Arg-51 to Ser-67.
875462	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5311 as residues: Ser-2 to Ser-14, Arg-75 to Asn-85.
875468	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5313 as residues: Thr-35 to Thr-49.
875474	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5314 as residues: Asp-1 to Asp-13, Arg-40 to Arg-56, Ser-72 to

	Asp-84, Ala-88 to Arg-96, Lys-115 to Phe-121, Asp-133 to Lys-139, Leu-203 to Leu-210, Asp-264 to Arg-269.
875475	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5315 as residues: Pro-12 to Gly-19.
875479	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5318 as residues: His-32 to Lys-40.
875481	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5319 as residues: Arg-22 to Ser-39, Val-42 to Thr-54, Gln-61 to His-69, Glu-83 to Gly-109, Pro-111 to Gly-118.
875490	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5322 as residues: Cys-75 to Thr-81.
875491	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5323 as residues: Gln-8 to His-15, Ser-32 to Gln-43, Leu-51 to Glu-70.
875499	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5329 as residues: Asn-36 to Leu-55.
875500	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5330 as residues: Thr-31 to Arg-39.
875501	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5331 as residues: Asp-52 to Asn-59.
875508	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5334 as residues: Pro-1 to Ile-18, Asp-28 to Lys-33, Leu-50 to Gln-55, Glu-85 to Ala-94, Leu-121 to Ser-130, Lys-143 to Gly-150, Leu-173 to Asp-179, Lys-183 to Asp-192, Lys-196 to Glu-202, Asn-219 to Asn-227, Glu-235 to Glu-248.
875512	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5335 as residues: Asp-10 to Trp-16, Glu-33 to Asn-43.
875514	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5336 as residues: Asp-11 to Tyr-32, Gln-43 to Thr-58, His-70 to Arg-79, Ser-101 to Ala-108, Met-110 to Ser-124.
875515	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5337 as residues: Met-1 to Arg-8, Met-10 to His-17.
875516	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5338 as residues: Leu-2 to Ser-8, Gln-41 to Gly-46, Asp-70 to Gln-80, Pro-82 to Gly-97.
875518	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5340 as residues: Arg-1 to Trp-11, Ser-28 to Leu-42, Gly-65 to Gly-70, Ala-72 to Gln-77, Gly-89 to Lys-98, Asp-126 to Thr-136, Gln-218 to Gly-226, Lys-261 to Gly-282.
875520	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5341 as residues: Arg-5 to Ser-18, Arg-36 to Gly-42, Gln-45 to Gly-56, Val-69 to Arg-75.
875525	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5343 as residues: Arg-6 to Thr-22, Arg-31 to His-38.
875527	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5344 as residues: Gly-24 to Leu-31, Ser-64 to Val-70, Arg-93 to Trp-100.
875528	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5345 as residues: Thr-6 to Ile-13.

875534	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5347 as residues: Arg-1 to Thr-14, Arg-28 to Asp-34, Gln-51 to Ser-60, Lys-69 to Gly-78, Val-110 to Val-115, Asn-135 to Glu-141, Asn-167 to Pro-179, Lys-203 to Lys-214, Gly-267 to Pro-279.
875538	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5348 as residues: Thr-1 to Arg-6.
875544	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5351 as residues: Gln-1 to Asn-8.
875545	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5352 as residues: Cys-2 to Gly-16, Glu-35 to Leu-40, Pro-61 to Gln-66.
875547	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5354 as residues: Leu-37 to His-43.
875548	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5355 as residues: Val-15 to Asp-21, Cys-29 to Ser-36.
875550	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5356 as residues: Arg-81 to Gln-93, Leu-103 to Val-116.
875551	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5357 as residues: Glu-11 to Lys-22, Glu-36 to Gly-41.
875553	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5359 as residues: Arg-6 to Lys-11, Phe-16 to Ile-21, Thr-48 to Leu-56, Pro-64 to Arg-70.
875554	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5360 as residues: Tyr-2 to Ser-10, Asn-69 to Leu-80.
875559	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5363 as residues: Pro-123 to Asn-130.
875563	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5365 as residues: Pro-35 to Gly-62.
875565	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5367 as residues: Pro-2 to Asp-7, Gln-13 to Gln-29, Pro-35 to Trp-41.
875570	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5369 as residues: Leu-1 to Ser-6, Ser-45 to Lys-56, Asn-66 to Lys-78.
875574	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5372 as residues: Pro-10 to Gln-15, Cys-25 to Ile-30, Ser-42 to Lys-47.
875583	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5374 as residues: Lys-6 to Lys-37, Arg-43 to Leu-49, Met-53 to Val-59.
875590	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5380 as residues: Cys-128 to Pro-134.
875594	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5381 as residues: Gly-40 to Ser-45.
875596	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5382 as residues: Gly-1 to Gly-10.
875597	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5383 as residues: His-3 to Ser-9.
875604	Preferred epitopes include those comprising a sequence shown in SEQ

	ID NO. 5386 as residues: Lys-7 to Ser-20, Arg-67 to Ser-74.
875605	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5387 as residues: Gly-17 to Ser-24, Met-42 to Arg-48.
875606	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5388 as residues: Tyr-1 to Gly-13, Glu-32 to Asp-43, Ser-55 to Ile-62, Pro-119 to Asn-131.
875609	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5390 as residues: Thr-12 to Ser-20, Leu-60 to Ala-66.
875610	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5391 as residues: Cys-41 to Ser-47.
875613	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5394 as residues: Leu-12 to Lys-18.
875625	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5395 as residues: Asp-8 to Leu-25, Arg-94 to Ala-102, Glu-133 to Ala-138.
875628	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5396 as residues: Ser-17 to Gly-23.
875629	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5397 as residues: Glu-1 to Glu-11, Arg-21 to Ser-27.
875631	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5399 as residues: Val-37 to Asn-43, Glu-62 to Pro-69, Gln-118 to Tyr-131, Ser-144 to Trp-150.
875633	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5401 as residues: Asn-11 to Arg-16.
875634	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5402 as residues: Ile-1 to Gly-10, Asp-24 to Arg-29.
875635	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5403 as residues: Phe-1 to Ile-8, Thr-21 to Leu-38, Glu-55 to Lys-70, Lys-76 to Leu-82, Lys-84 to Glu-89, Ile-93 to Ser-98.
875636	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5404 as residues: Pro-30 to Asp-35.
875638	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5405 as residues: Asp-1 to Gly-7, Arg-13 to Arg-18, Arg-48 to Ser-54.
875640	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5407 as residues: Thr-36 to Cys-47.
875642	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5409 as residues: Arg-2 to Thr-8, Thr-46 to His-51.
875646	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5410 as residues: Ala-4 to Arg-10, Cys-22 to Lys-27.
875650	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5411 as residues: Glu-29 to Lys-34, Leu-151 to Tyr-156, Glu-162 to Arg-170.
875651	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5412 as residues: Leu-119 to Gln-125, Arg-128 to Ser-139, Gln-145 to Pro-158.
875653	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5413 as residues: Pro-1 to Gln-14.
875654	Preferred epitopes include those comprising a sequence shown in SEQ



	ID NO. 5414 as residues: Arg-34 to Gly-66.
875658	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5415 as residues: His-19 to Tyr-30, Ala-53 to Ala-59, Ala-90 to Pro-101, Lys-132 to Lys-139, Ala-152 to Arg-158, Phe-168 to Leu-175, Arg-178 to Lys-186.
875661	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5416 as residues: Tyr-2 to Ser-8, Thr-15 to Ala-25.
875662	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5417 as residues: Gly-5 to Cys-12, Phe-40 to Thr-47.
875663	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5418 as residues: Thr-4 to Ser-12.
875665	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5419 as residues: Lys-2 to Lys-7.
875669	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5420 as residues: Lys-1 to Gly-11.
875677	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5423 as residues: Gly-1 to His-7, Val-10 to Phe-17, Asp-62 to Arg-67.
875678	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5424 as residues: Ile-2 to Ile-9, Asn-76 to Gln-82.
875681	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5426 as residues: Glu-1 to Asn-12, Pro-20 to Ala-26, Thr-42 to Ser-50.
875683	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5428 as residues: Val-60 to Pro-69.
875687	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5429 as residues: Asp-18 to Phe-24.
875688	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5430 as residues: Glu-8 to Glu-13.
875689	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5431 as residues: Lys-24 to Lys-30.
875690	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5432 as residues: Gly-3 to Leu-20, Trp-38 to Arg-44, Lys-58 to Lys-64.
875698	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5434 as residues: Tyr-43 to Lys-52, Glu-60 to Arg-66, Gln-84 to Cys-89, Gln-106 to Lys-117, Thr-140 to Asp-168, Gln-170 to Arg-177.
875704	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5438 as residues: Gly-24 to Thr-30, Ser-103 to Gly-109.
875717	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5441 as residues: Cys-12 to Cys-34, Pro-36 to Thr-45, Arg-75 to Asn-85.
875719	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5442 as residues: Asn-1 to Tyr-7.
875722	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5443 as residues: Leu-2 to Phe-7.
875724	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5444 as residues: Asn-86 to Ser-91.

875725	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5445 as residues: Thr-9 to Thr-17, Arg-33 to Val-41.
875727	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5446 as residues: Thr-16 to Pro-23, Pro-39 to Trp-48, Arg-50 to Lys-55, Gly-73 to Gly-79.
875734	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5451 as residues: Ser-12 to Thr-18, Pro-20 to Pro-25.
875736	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5452 as residues: Phe-10 to Arg-15, Ile-48 to Thr-53, Ser-64 to Asn-69.
875737	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5453 as residues: Leu-1 to Cys-6, Ala-74 to Gly-87, Gln-106 to Gly-111.
875738	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5454 as residues: Glu-11 to Asp-19, Gly-40 to Thr-47, Pro-66 to Arg-71.
875739	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5455 as residues: Gly-45 to Asp-50.
875740	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5456 as residues: Glu-1 to Gln-22.
875746	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5457 as residues: Leu-55 to Gln-64.
875751	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5459 as residues: Phe-21 to Leu-26, Gly-81 to His-87.
875752	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5460 as residues: Ser-11 to Asn-16, Trp-33 to Arg-49.
875753	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5461 as residues: Glu-1 to Ile-17, Leu-54 to Asn-59.
875754	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5462 as residues: Arg-53 to Val-58.
875760	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5463 as residues: Phe-45 to Asn-51.
875765	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5465 as residues: Pro-7 to Gly-12.
875766	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5466 as residues: Gly-21 to Phe-28.
875769	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5468 as residues: Lys-7 to Gly-12.
875772	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5469 as residues: Arg-19 to Pro-45, Gly-60 to Leu-72, Leu-90 to Asn-109.
875774	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5471 as residues: Ile-27 to Val-33, Val-63 to Ser-68.
875779	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5473 as residues: Gln-54 to Ser-63, Glu-84 to Lys-92, Val-100 to Gln-105.
875781	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5475 as residues: Glu-72 to Ala-80.
875783	Preferred epitopes include those comprising a sequence shown in SEQ

	ID NO. 5477 as residues: Gly-1 to Asn-15.
875784	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5478 as residues: Glu-17 to Asp-22, Asn-30 to Cys-35, Leu-39 to Lys-49.
875786	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5480 as residues: Arg-8 to Thr-17.
875787	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5481 as residues: Ser-3 to Pro-16, Asp-38 to Ser-43, Arg-53 to Gln-62, Trp-78 to Ser-84.
875789	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5482 as residues: Arg-1 to Ile-8, Pro-50 to Thr-62.
875794	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5484 as residues: Thr-8 to Val-13, Tyr-39 to Arg-46.
875800	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5486 as residues: Tyr-1 to Gln-12, Gly-17 to Cys-26, Trp-37 to Asn-43, Leu-46 to Gly-51.
875804	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5488 as residues: Asp-54 to Gly-67.
875805	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5489 as residues: Ser-1 to Thr-9.
875809	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5491 as residues: Asn-16 to Leu-30, Ala-48 to Thr-53, Arg-109 to Asp-114, Arg-120 to Gly-126, Pro-153 to Asp-161, Asn-177 to Lys-186, Ser-253 to Ser-260.
875810	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5492 as residues: Pro-1 to Lys-11, Pro-31 to Leu-39, Thr-67 to Lys-77.
875814	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5493 as residues: His-1 to Gly-14, Ala-21 to Arg-30.
875815	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5494 as residues: Ile-14 to Leu-35, Pro-37 to Thr-51.
875817	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5496 as residues: Ser-15 to Ile-24, Asn-56 to Lys-67, Ser-80 to Lys-95, Gly-148 to Pro-165.
875820	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5498 as residues: Phe-2 to Ser-9, Cys-12 to Ser-23, Glu-37 to Pro-48, Glu-56 to Asp-64.
875821	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5499 as residues: Gly-98 to Ala-110.
875822	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5500 as residues: Ala-7 to Pro-18, Ser-57 to Ser-64, Phe-94 to Gln-105, Leu-129 to Gly-141.
875825	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5502 as residues: Lys-1 to Lys-19, Glu-66 to Gln-73, Asn-75 to Asn-80, Met-112 to Asn-118, Val-122 to Thr-134.
875828	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5504 as residues: His-1 to Leu-12, Leu-16 to Cys-30, Thr-46 to Asn-56.
875832	Preferred epitopes include those comprising a sequence shown in SEQ

	ID NO. 5505 as residues: Lys-1 to Arg-9, Cys-32 to Tyr-39, Lys-53 to Gly-64, Phe-86 to Asn-92.
875836	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5508 as residues: His-79 to Ser-92.
875837	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5509 as residues: Ser-47 to Arg-54.
875838	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5510 as residues: Ser-1 to Phe-8.
875839	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5511 as residues: Gln-1 to Gly-22, Pro-36 to Arg-42, Arg-89 to Gln-94.
875840	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5512 as residues: Thr-6 to Asn-16, Gln-50 to Lys-66.
875841	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5513 as residues: Ala-44 to Arg-51, Val-71 to Ser-76.
875845	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5514 as residues: Gly-1 to Lys-6, Ser-54 to Ser-60.
875846	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5515 as residues: Ser-28 to Gly-33.
875855	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5521 as residues: Glu-13 to Asn-18, Asn-53 to Lys-59.
875856	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5522 as residues: Ala-28 to Ser-33.
875858	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5523 as residues: His-1 to Asn-17, Gly-21 to Arg-28, Lys-43 to Asn-49, Ser-64 to His-80, Ala-91 to Asp-130, Gly-144 to Ser-158.
875863	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5524 as residues: Pro-23 to Asp-28, Pro-40 to Gln-47.
875864	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5525 as residues: Pro-1 to Ser-15, Leu-27 to Lys-32, Arg-39 to Ser-53, Thr-58 to Glu-81, Gly-87 to Leu-92, Val-96 to Glu-106, Lys-114 to Ile-131, Asp-134 to Lys-140, Asn-142 to Lys-149, Lys-155 to Gly-168.
875865	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5526 as residues: His-11 to Cys-23, Ala-29 to Gln-35, His-43 to Arg-50.
875868	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5527 as residues: Arg-33 to Glu-42, Arg-45 to Gly-64, Ala-79 to Asn-117, Thr-130 to Lys-143, Ser-222 to Lys-233, Val-235 to Asn-240, Leu-289 to Met-294.
875871	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5528 as residues: Gln-1 to Ala-17, Gln-43 to Asp-48.
875874	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5529 as residues: Glu-40 to Thr-50.
875884	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5530 as residues: Ser-14 to Cys-19, Lys-53 to Asn-58, Ser-63 to Ser-70, Gly-118 to Cys-123, Cys-132 to Gly-138.
875886	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5531 as residues: Asn-46 to Glu-51.

875888	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5532 as residues: Lys-1 to Gly-17, Arg-56 to Gln-61, Gln-82 to Pro-89.
875891	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5533 as residues: Tyr-4 to Gly-11, Phe-33 to Asn-38.
875894	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5534 as residues: Arg-11 to Glu-24, Arg-39 to Glu-52, His-70 to Gly-82, His-98 to Arg-124, His-126 to Ser-142, His-154 to Gly-166.
875897	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5535 as residues: Pro-1 to Lys-8, Phe-49 to Pro-67, Leu-88 to Trp-100.
875905	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5539 as residues: Pro-19 to Cys-28, Leu-40 to Thr-49, Glu-57 to Pro-69, Phe-82 to Asn-89.
875908	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5542 as residues: Val-27 to Gly-34.
875912	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5543 as residues: Lys-5 to Gln-11, Ser-16 to Lys-28, Pro-39 to Phe-44, Thr-136 to Lys-148, Cys-182 to His-189, Val-197 to Tyr-202, Ser-273 to Gly-300.
875914	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5545 as residues: Ser-7 to Lys-13, Met-16 to Trp-21, Pro-54 to Gly-60, Ser-112 to Gly-117.
875923	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5547 as residues: Asn-1 to Lys-10, Glu-29 to Thr-35, Glu-41 to Glu-57, Glu-78 to Arg-83, Ala-97 to Trp-102.
875924	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5548 as residues: Gln-1 to Asn-8, Arg-22 to Leu-28, Ser-30 to Phe-48, Ser-51 to Glu-56, Gln-70 to Leu-88, Phe-101 to Asn-111, Arg-113 to Tyr-121, Ser-130 to Asn-135, Glu-141 to Gln-152, Asn-169 to Trp-191.
875925	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5549 as residues: Ser-45 to Ala-50.
875926	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5550 as residues: Leu-4 to Ser-13.
875927	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5551 as residues: Arg-2 to Lys-21.
875932	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5552 as residues: Asp-27 to Gln-33.
875933	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5553 as residues: Gly-1 to Gln-8, Met-19 to Ser-24.
875935	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5555 as residues: Asn-20 to Thr-25, Ser-30 to Pro-35.
875936	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5556 as residues: Gly-12 to Lys-18, Arg-46 to Glu-56, Leu-67 to Gly-73, Ala-91 to Ser-102.
875937	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5557 as residues: Arg-4 to Thr-10, Arg-61 to Glu-71, Leu-82 to Gly-88, Ala-106 to Lys-142.

875939	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5559 as residues: Arg-3 to Leu-15, Arg-17 to Asn-24.
875940	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5560 as residues: Gly-28 to Phe-34, Gly-36 to Cys-41, Arg-46 to Arg-54, Pro-75 to Arg-90.
875941	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5561 as residues: Gln-24 to Glu-35, Lys-53 to Gln-67, Pro-85 to Trp-98.
875942	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5562 as residues: Cys-74 to Ala-84.
875946	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5563 as residues: Gly-34 to Pro-48, Arg-86 to Gly-91.
875951	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5565 as residues: Pro-31 to Leu-41.
875955	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5568 as residues: His-19 to Asn-24, Pro-39 to Lys-45.
875967	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5569 as residues: Arg-30 to Arg-38.
875971	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5570 as residues: Ser-1 to Asp-8, Asn-16 to Ser-35, Asn-47 to Pro-70.
875972	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5571 as residues: Pro-14 to Arg-23, Phe-41 to Gly-49, His-69 to His-76, Tyr-84 to Asn-90.
875976	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5573 as residues: Tyr-3 to Gly-10.
875984	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5576 as residues: Ser-2 to Gln-15.
875991	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5579 as residues: Thr-47 to Gly-53.
875995	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5581 as residues: Pro-3 to Glu-8.
875999	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5584 as residues: Gly-11 to Ala-16, Gln-70 to His-78.
876006	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5586 as residues: Pro-12 to Thr-22.
876008	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5588 as residues: Cys-2 to Asn-10.
876012	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5590 as residues: Trp-30 to Thr-43.
876018	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5592 as residues: Pro-52 to Asn-63, Pro-70 to Ile-79, Arg-93 to Gln-111.
876021	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5594 as residues: Ala-59 to Ser-72, Ser-84 to Leu-94, Thr-98 to Lys-105, Val-109 to Glu-119, Asn-124 to Leu-139, Pro-146 to Ala-155, Ser-161 to Thr-190, Glu-216 to His-221, Asn-229 to Gly-240, Ile-258 to Gly-269, Thr-300 to Thr-310, Thr-312 to Ser-317.
876022	Preferred epitopes include those comprising a sequence shown in SEQ

	ID NO. 5595 as residues: Leu-2 to Tyr-11, Glu-55 to Thr-60.
876023	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5596 as residues: Lys-45 to Phe-58, Pro-99 to Gly-105, Arg-124 to Arg-130.
876024	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5597 as residues: Cys-7 to Arg-12, Pro-32 to Ser-49, Arg-59 to Gly-70, Ala-74 to Arg-82.
876028	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5601 as residues: Gly-46 to Gly-51.
876029	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5602 as residues: Ala-4 to Thr-9, Gln-17 to Thr-40.
876044	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5606 as residues: Asn-6 to Lys-12, His-32 to Phe-41.
876045	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5607 as residues: Thr-5 to Glu-14, Pro-23 to Tyr-28, Arg-42 to Pro-49, Lys-87 to Ser-95.
876048	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5608 as residues: Gln-1 to Asp-11, Arg-18 to Gly-23, Thr-31 to Pro-38.
876057	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5611 as residues: Glu-17 to Ser-42.
876059	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5612 as residues: Pro-34 to His-49.
876065	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5614 as residues: Ser-28 to Val-33, Gln-41 to Gln-46, Gln-53 to Gln-63, Ala-76 to His-84, Ile-88 to Ser-93, Pro-99 to Ala-105, Pro-114 to Ser-122, Pro-145 to Thr-153, Pro-197 to Gln-206.
876078	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5616 as residues: Arg-71 to Trp-80, Arg-88 to Arg-99.
876079	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5617 as residues: Cys-16 to His-21, Lys-23 to Asp-31.
876081	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5618 as residues: Pro-6 to Cys-12.
876086	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5620 as residues: Cys-66 to Ser-74, Arg-81 to His-90.
876089	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5622 as residues: Ser-2 to Gly-11.
876090	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5623 as residues: Gln-1 to Glu-13, Lys-25 to Ser-34, Asp-49 to Gln-54.
876091	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5624 as residues: Phe-14 to Tyr-19, Arg-24 to Arg-32.
876093	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5625 as residues: Ser-1 to Glu-8, Asp-30 to Gly-37, Val-44 to Glu-58.
876094	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5626 as residues: Gly-1 to Gly-7, Ile-23 to Ala-29, Phe-40 to Gln-45.
876095	Preferred epitopes include those comprising a sequence shown in SEQ

	ID NO. 5627 as residues: Lys-1 to Lys-6, Pro-8 to Glu-19.
876097	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5628 as residues: Arg-30 to Ser-37.
876098	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5629 as residues: Leu-18 to Leu-23.
876101	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5630 as residues: Gly-56 to Asp-62.
876104	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5631 as residues: Gln-1 to Glu-7, Ala-31 to Glu-48.
876107	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5633 as residues: Gly-13 to Gln-19, Arg-58 to Gly-63, Leu-129 to Pro-134.
876118	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5637 as residues: Pro-35 to Gly-42, Pro-62 to Arg-74, Val-87 to Ala-93, Leu-119 to Ala-124.
876121	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5638 as residues: Pro-2 to Pro-35, Ser-40 to Leu-57, Thr-83 to Thr-93, His-96 to Thr-105, Leu-114 to Gly-125, Asp-128 to Asp-133, Lys-146 to Ser-156.
876140	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5644 as residues: Ala-39 to Leu-47, Val-49 to Lys-55, Thr-66 to Asp-75, Thr-85 to Gly-104, Ala-114 to Gly-147, Pro-176 to Thr-199, Ser-205 to Ser-221, Glu-233 to Lys-240, Lys-246 to Asp-251, Glu-256 to Ser-267, Ser-291 to Leu-302, Thr-305 to Asp-324, Cys-336 to Val-345, Phe-367 to Cys-375.
876151	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5648 as residues: Gly-101 to Arg-106.
876152	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5649 as residues: Arg-1 to Gly-12, His-33 to Leu-42.
876155	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5651 as residues: Phe-26 to Lys-51, Gln-61 to Asp-75, Gly-86 to Asn-92, Asn-101 to Cys-106, Lys-119 to Leu-124, Pro-126 to Tyr-135, Ser-137 to Ser-150, His-161 to Ser-168, Asp-175 to Ser-182, Asn-189 to Lys-207, Pro-225 to Thr-234, His-240 to Gly-259, Glu-266 to Val-271, Asp-285 to Ala-290, Asn-321 to Ile-353.
876156	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5652 as residues: Lys-21 to Gly-26.
876170	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5656 as residues: Arg-15 to Arg-21.
876172	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5657 as residues: Trp-73 to Trp-80, Tyr-90 to Lys-97, Lys-100 to Trp-111.
876174	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5658 as residues: Gly-7 to Glu-12, Ser-16 to Gln-25.
876177	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5659 as residues: Phe-9 to Tyr-15.
876182	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5661 as residues: Pro-28 to Arg-34, His-66 to Pro-81, Ser-83 to Ala-93, Gly-98 to Lys-114.



876184	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5663 as residues: Asn-35 to Cys-40, Ser-75 to Phe-84.
876192	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5665 as residues: Thr-4 to Ser-14, Ile-83 to Ala-94.
876198	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5667 as residues: Pro-7 to Thr-17.
876200	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5668 as residues: Leu-43 to Pro-50.
876201	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5669 as residues: Pro-28 to Glu-37.
876206	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5670 as residues: Gly-29 to Asp-39.
876207	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5671 as residues: Arg-54 to Lys-95.
876208	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5672 as residues: Ser-44 to Leu-49, Lys-52 to Pro-57, Gly-65 to Phe-71, Asp-94 to Trp-99, Gly-137 to Asp-149, Ser-154 to Glu-159, Glu-168 to Ile-173.
876209	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5673 as residues: Gly-101 to Arg-107, Ser-112 to Cys-117.
876215	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5675 as residues: Phe-27 to Ile-34.
876224	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5677 as residues: Ser-58 to Gly-63, Thr-69 to Gly-76, Ser-107 to Thr-115, Ser-144 to Gly-151, Leu-175 to Trp-181.
876226	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5678 as residues: Arg-57 to Thr-62.
876228	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5679 as residues: Glu-7 to Ser-25, Lys-39 to Leu-46.
876229	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5680 as residues: Phe-48 to Ser-58.
876232	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5681 as residues: Thr-3 to Thr-8.
876238	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5683 as residues: Asn-30 to Lys-43, Pro-58 to Glu-65, Arg-77 to Asn-85.
876239	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5684 as residues: Thr-7 to Pro-15.
876259	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5685 as residues: Lys-1 to Gln-7, Gly-39 to Ile-50, Ile-68 to Cys-84, Leu-92 to Glu-99, Glu-109 to Glu-121, Pro-156 to Cys-172, Pro-174 to Thr-189, Arg-212 to Gln-227.
876260	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5686 as residues: Ala-40 to Ala-45.
876261	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5687 as residues: Arg-18 to Thr-31, Ala-39 to Gly-50, Ser-71 to Val-76.
876265	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5688 as residues: Thr-4 to Ser-9.

876266	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5689 as residues: Leu-26 to Lys-39.
876270	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5691 as residues: Pro-20 to Arg-27.
876274	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5692 as residues: Asn-52 to Ile-58.
876277	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5694 as residues: Arg-21 to Arg-30.
876280	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5696 as residues: His-16 to Phe-21.
876281	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5697 as residues: Gln-1 to Ser-8, Val-41 to Arg-47.
876282	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5698 as residues: Gln-1 to Val-6, Asp-8 to Thr-16.
876284	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5699 as residues: Ala-24 to Arg-30, Thr-88 to Pro-107.
876306	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5702 as residues: Gly-1 to Val-9, Pro-47 to His-57.
876308	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5703 as residues: Lys-28 to Ser-42, Gln-49 to Lys-57, Ser-76 to Gly-83, Glu-99 to Val-106, Gln-132 to His-142, Ala-202 to Trp-210, His-271 to Ile-287.
876309	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5704 as residues: His-58 to Ala-63, Arg-86 to Gly-92.
876322	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5705 as residues: Pro-33 to Arg-38, Thr-82 to Asp-88, Ala-103 to Lys-111, Lys-117 to Phe-122.
876326	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5706 as residues: Ser-15 to Asp-28, Glu-37 to Gly-42.
876330	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5708 as residues: Arg-41 to Lys-56.
876335	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5711 as residues: Glu-8 to Cys-16, Pro-22 to Gln-32, Lys-40 to Pro-49.
876340	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5712 as residues: Pro-1 to Glu-18, Gly-26 to Pro-33, Pro-66 to Gly-75.
876345	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5713 as residues: Arg-1 to Gly-10.
876354	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5714 as residues: Pro-12 to Thr-18.
876361	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5715 as residues: Arg-14 to Val-29.
876364	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5716 as residues: Gln-22 to Gly-28.
876370	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5717 as residues: Gly-4 to Arg-12, Gly-33 to Cys-46.
876372	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5718 as residues: Lys-30 to Glu-35.

876374	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5719 as residues: Ser-2 to Ser-8, Glu-26 to His-33, Ser-56 to Gly-61.
876380	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5722 as residues: Ser-11 to Pro-16.
876382	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5724 as residues: Glu-15 to Ser-20.
876383	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5725 as residues: Tyr-16 to Thr-21, Lys-33 to Gln-39.
876385	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5726 as residues: Leu-11 to Phe-46.
876395	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5729 as residues: Arg-7 to Ser-26.
876397	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5730 as residues: Pro-19 to Gln-25, Thr-41 to Pro-47.
876398	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5731 as residues: Glu-1 to Arg-7.
876400	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5733 as residues: Gln-13 to Trp-20, Gly-60 to Phe-65, Cys-69 to Trp-77.
876401	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5734 as residues: Gly-25 to Trp-30, Arg-37 to Gly-44, Ser-46 to Arg-59, Ser-70 to Ser-76, Leu-106 to Gly-112.
876404	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5736 as residues: Tyr-1 to Gly-17.
876405	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5737 as residues: Tyr-1 to Ala-6, Trp-30 to Ser-36, Asp-48 to Ile-62, Ile-91 to Ile-100, Asn-119 to Asn-128, Glu-146 to Glu-152.
876408	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5738 as residues: Gly-7 to Leu-15.
876409	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5739 as residues: Gly-10 to Asn-15.
876418	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5740 as residues: Pro-57 to Asp-63.
876420	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5742 as residues: Pro-6 to Ser-12.
876426	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5745 as residues: Phe-2 to Thr-12.
876428	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5747 as residues: Thr-4 to Trp-10, Pro-25 to Ala-31.
876431	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5748 as residues: Thr-1 to Gln-6, Lys-15 to Glu-23, Pro-39 to Ile-44, Asn-63 to Gln-71, Gln-101 to Arg-111, Leu-118 to Ser-124, Leu-141 to Val-146, Pro-154 to Pro-161, Ser-187 to Pro-192, Arg-207 to Met-245, Ala-253 to Ser-263.
876432	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5749 as residues: Lys-45 to Asn-55.
876435	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5750 as residues: Asp-84 to Asn-91.

876436	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5751 as residues: Pro-81 to His-89.
876440	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5752 as residues: Asp-1 to Leu-6, Glu-55 to Ser-60.
876441	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5753 as residues: Pro-14 to Leu-21, Cys-34 to Gly-39.
876448	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5756 as residues: Thr-1 to Glu-11, Thr-19 to Lys-30, Asn-32 to Glu-39, Leu-60 to Tyr-111, Ala-127 to Phe-132, Pro-184 to Thr-306.
876451	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5757 as residues: Thr-52 to Lys-59.
876452	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5758 as residues: Asn-1 to Arg-11, Val-23 to Ser-28, Asp-35 to Thr-40, Glu-116 to Arg-122, Leu-163 to Ser-170, Ile-267 to Ser-272.
876464	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5761 as residues: Thr-6 to Lys-11, Pro-58 to Ile-72, Ser-81 to Gly-94.
876465	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5762 as residues: Pro-2 to Trp-11, Pro-26 to Ala-32.
876469	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5763 as residues: Trp-1 to Leu-17.
876470	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5764 as residues: Pro-30 to Glu-41, Cys-62 to Trp-68, Leu-78 to Asn-97, Arg-131 to Asn-136.
876471	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5765 as residues: Val-7 to Leu-13, Glu-26 to Gln-32.
876472	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5766 as residues: Ser-91 to Gly-101.
876473	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5767 as residues: His-12 to His-22.
876476	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5770 as residues: Phe-2 to Trp-7, Cys-35 to Asn-46, Pro-55 to Asn-70, Pro-131 to Cys-137, Phe-141 to Thr-154, Ala-166 to Phe-177.
876481	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5772 as residues: Ala-87 to Ser-94, Asp-104 to Arg-112, Leu-114 to Asp-119, Ser-186 to Thr-202.
876483	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5773 as residues: Gly-1 to Pro-6.
876484	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5774 as residues: Met-2 to Leu-9, Lys-11 to Pro-28, Asp-57 to Leu-68, Gln-81 to Phe-118.
876487	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5775 as residues: Lys-1 to Ser-7.
876490	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5776 as residues: Glu-12 to Asp-17, Thr-26 to His-34, Asn-48 to Tyr-57.
876491	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5777 as residues: Arg-1 to Gln-11.
876494	Preferred epitopes include those comprising a sequence shown in SEQ

	ID NO. 5778 as residues: Asn-40 to Thr-45, His-210 to Pro-215, Glu-369 to Thr-375, Lys-383 to Leu-397, Pro-438 to Ile-447, Pro-510 to Tyr-520, Arg-528 to Arg-533, Thr-549 to Thr-555.
876495	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5779 as residues: Arg-11 to Arg-29, Arg-99 to Gly-105.
876496	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5780 as residues: Glu-1 to Gly-10.
876498	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5781 as residues: Ser-1 to Ser-14.
876499	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5782 as residues: Pro-19 to Tyr-25.
876504	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5784 as residues: His-7 to Asp-12, Glu-21 to Lys-26, Gln-79 to Ser-87.
876507	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5785 as residues: Pro-1 to Ser-12, Leu-26 to Gly-54, Thr-61 to Ala-73.
876513	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5787 as residues: Ser-3 to Gly-39, Trp-89 to Asp-96, Glu-103 to Asn-111, Leu-138 to Pro-145.
876518	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5788 as residues: Met-31 to Pro-38.
876524	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5789 as residues: Pro-26 to Gln-32.
876526	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5790 as residues: Met-7 to Tyr-13.
876530	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5791 as residues: Tyr-37 to Val-45.
876533	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5792 as residues: Lys-41 to Lys-47, His-52 to Gln-58, Gln-100 to Cys-106.
876535	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5794 as residues: Asp-1 to Asp-12.
876536	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5795 as residues: Gly-11 to Gly-28, Glu-35 to Ala-40, Leu-42 to Gly-51, Ser-65 to Cys-70.
876538	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5796 as residues: Tyr-5 to Thr-12.
876543	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5798 as residues: Gln-1 to Ala-9, Cys-56 to Gly-61, Trp-105 to Thr-110, Arg-150 to Thr-155, Leu-189 to Lys-195.
876544	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5799 as residues: Thr-15 to Asp-27.
876545	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5800 as residues: Arg-1 to Asp-7, Leu-19 to Lys-33, Ser-45 to Thr-54.
876546	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5801 as residues: Thr-15 to Lys-25, Pro-35 to Phe-42, Glu-58 to Thr-72, Glu-115 to Met-126, Gln-131 to Thr-139, Ser-142 to Glu-157,

	Pro-165 to Gln-188, Phe-284 to Lys-301.
876553	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5805 as residues: Arg-14 to Arg-19, Asn-27 to Val-32, Glu-68 to Thr-77, Gly-85 to Asp-90, Asp-221 to Gln-229, Thr-236 to Val-242, Thr-259 to Trp-266, Ser-268 to Asn-273, Asn-283 to Gly-288.
876558	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5807 as residues: Arg-22 to Gln-34.
876559	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5808 as residues: Asn-15 to Ser-20, Arg-100 to Phe-107, Glu-111 to Asp-118, Ile-122 to Val-127, Cys-219 to Val-227.
876560	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5809 as residues: Pro-7 to Ser-14, Thr-26 to Cys-51, Leu-55 to Tyr-64.
876572	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5810 as residues: Lys-16 to Lys-21.
876575	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5811 as residues: Pro-10 to Trp-19, Glu-47 to Gly-52, Tyr-75 to Gly-88, Met-119 to Asp-131.
876579	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5813 as residues: Ser-2 to Pro-21.
876581	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5815 as residues: Gly-32 to Gly-44, Pro-52 to Cys-60, Asp-63 to Leu-68, Lys-148 to Asn-160.
876583	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5816 as residues: Glu-19 to Cys-30.
876595	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5821 as residues: Asn-1 to Arg-8, Glu-64 to Thr-70.
876596	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5822 as residues: Lys-61 to His-66, Glu-70 to Tyr-78, Pro-90 to Ile-95, Val-118 to Asp-127, Asp-192 to Phe-199, Asn-274 to Met-279, Ser-281 to Arg-291, Thr-306 to Tyr-315, Lys-338 to Gln-343, Lys-350 to Asp-356, Pro-374 to Asp-380, Gly-398 to Pro-405, Lys-438 to Asn-446.
876597	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5823 as residues: His-1 to Ser-6, Glu-14 to Gly-22.
876600	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5824 as residues: Asp-22 to Pro-30, Ser-49 to Asn-57, Thr-76 to Ala-91.
876601	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5825 as residues: Leu-31 to Ser-41.
876602	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5826 as residues: Leu-11 to Arg-19, Arg-33 to Ala-38, Ala-40 to Gln-46, Pro-57 to Gly-62, Ser-70 to Arg-76, Thr-97 to Arg-103, Lys-119 to Lys-124.
876608	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5827 as residues: Val-10 to Gln-18.
876609	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5828 as residues: Leu-39 to Gln-52.
876610	Preferred epitopes include those comprising a sequence shown in SEQ

	ID NO. 5829 as residues: Ser-11 to Glu-20.
876612	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5830 as residues: Lys-1 to Asn-8, Glu-10 to Thr-15, Ser-22 to Gly-28, Pro-49 to His-54.
876622	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5832 as residues: Pro-46 to Leu-51.
876630	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5833 as residues: Gln-41 to Pro-46.
876633	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5835 as residues: Ala-1 to Leu-9, Ala-48 to Asp-55.
876638	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5837 as residues: Gln-1 to Arg-12, Asp-22 to Pro-44, Lys-52 to Asp-62, Pro-68 to Lys-93, Pro-99 to Pro-129, Ala-138 to Ser-150, Lys-156 to Val-194, Ile-197 to Glu-210, Ala-213 to Ala-287, Leu-289 to Lys-327, Lys-330 to Gly-340, Asp-344 to Gln-360, Ile-396 to Thr-401, Lys-409 to Asp-418, Met-450 to Ala-460, Glu-468 to Asp-481, Ala-490 to Ser-517, Asp-523 to Ser-555.
876643	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5838 as residues: Gln-1 to Ser-13.
876645	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5839 as residues: Gly-1 to Gln-20, Gly-22 to Glu-27, Arg-46 to Phe-52, Thr-64 to His-72, Pro-94 to Lys-109, Ser-143 to Ser-151.
876646	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5840 as residues: Ser-29 to Glu-34.
876647	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5841 as residues: Trp-41 to Ser-46, Glu-59 to Lys-66, Lys-75 to His-80.
876652	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5844 as residues: Phe-23 to Val-42.
876656	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5845 as residues: Ser-38 to Cys-51, Asn-93 to Asp-100.
876657	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5846 as residues: Pro-112 to Gly-118.
876660	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5847 as residues: Glu-20 to Arg-26, Leu-30 to Cys-36, Gln-49 to Ser-55, Lys-82 to Thr-90.
876666	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5848 as residues: Val-39 to Asn-46, Ser-95 to Asp-101, Lys-118 to Val-124.
876677	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5851 as residues: Asn-1 to Val-6, Phe-76 to Tyr-83, Gly-129 to Gln-135, Thr-145 to Asp-153, Ser-210 to Gln-220, Thr-230 to Asn-236, Lys-242 to Ala-248.
876680	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5852 as residues: Ser-1 to Thr-9, Ala-32 to Asn-37, Thr-40 to Tyr-49, Gln-71 to Thr-80.
876683	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5853 as residues: Pro-18 to Gly-29, Lys-67 to Lys-89.
876685	Preferred epitopes include those comprising a sequence shown in SEQ

	ID NO. 5854 as residues: Lys-19 to Asn-25, Leu-27 to Leu-38, Val-61 to Val-68, Leu-152 to Tyr-159, Glu-222 to Cys-228, Asp-260 to Leu-265.
876687	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5855 as residues: Ala-60 to Arg-65, Ala-82 to Arg-87.
876689	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5856 as residues: Arg-1 to Asn-9, Gln-20 to Asn-27, His-29 to Arg-34.
876690	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5857 as residues: Pro-15 to Asn-25, Glu-48 to Phe-59, Ser-69 to Arg-74, Ala-77 to Ser-82, Leu-99 to Asn-105, Ala-108 to Pro-124, Ser-137 to Phe-150, Ser-173 to Gly-178, Pro-186 to Pro-191, Ala-199 to Lys-213, Val-229 to Asp-238, Arg-272 to Asn-290.
876693	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5858 as residues: Glu-3 to Gly-12, Arg-20 to Gln-30, Leu-34 to Gln-39, Asp-51 to Arg-58, Gln-69 to Val-77, Gly-105 to Lys-117.
876696	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5859 as residues: Arg-1 to Arg-7, Gly-72 to Asp-78, Lys-83 to Gln-90.
876701	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5861 as residues: Thr-22 to Lys-31.
876716	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5862 as residues: Tyr-28 to Leu-33, Ala-70 to Lys-87, Glu-106 to Gly-124, Gly-127 to Glu-160, Leu-179 to Asp-194.
876719	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5863 as residues: Asn-19 to Ser-25, Gln-57 to Leu-66, Asp-76 to Ser-81, Glu-101 to Gln-106, Phe-121 to Asp-127, Ser-133 to Asp-146, Thr-186 to Lys-197, Arg-259 to Leu-266, Asn-268 to Leu-274.
876725	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5865 as residues: Thr-23 to Pro-34, Glu-39 to Asp-83, Asn-89 to Lys-99, Asp-118 to Asp-128, Asn-135 to Glu-150, Glu-153 to Gly-168, Gly-181 to Thr-187, Arg-200 to Asp-205, Arg-273 to Ile-279, Thr-295 to Asp-300, Thr-316 to Cys-321.
876726	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5866 as residues: Tyr-17 to Gly-22, Lys-29 to Tyr-34, Asp-39 to Asp-44, Leu-71 to Glu-76, Pro-164 to Gly-171.
876732	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5869 as residues: Ser-1 to Gln-6, Leu-57 to Phe-62, Arg-86 to Glu-91.
876744	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5871 as residues: Thr-98 to Ser-104, Thr-115 to Tyr-126, Gln-149 to Glu-164.
876745	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5872 as residues: His-1 to Gln-7, Trp-14 to Gln-29, Arg-41 to Pro-48, Leu-91 to His-97, Pro-99 to Ser-114, Ser-119 to Gly-124.
876747	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5873 as residues: Ala-13 to Arg-35, Pro-58 to Met-75, Asn-104 to Ser-119, Pro-144 to Ile-167, Lys-183 to Phe-224, Cys-246 to Gly-252, Lys-304 to Gly-320.
876750	Preferred epitopes include those comprising a sequence shown in SEQ



	ID NO. 5874 as residues: Ala-1 to Ser-6, Ser-29 to Ser-37, Gln-52 to Tyr-58.
876752	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5875 as residues: Pro-44 to Gly-51.
876753	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5876 as residues: Arg-5 to Arg-12.
876760	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5877 as residues: Thr-11 to Ala-16, Thr-85 to Glu-92, Asn-114 to Glu-122, Asp-150 to Gly-156.
876762	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5878 as residues: Pro-14 to Ile-24, Thr-35 to Pro-46.
876771	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5881 as residues: His-28 to Gly-33.
876773	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5882 as residues: Gly-3 to Thr-9, Glu-39 to Lys-48, Arg-134 to Lys-139, Pro-147 to Val-152, Thr-167 to Glu-172, His-190 to Gln-196.
876791	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5885 as residues: Pro-1 to Glu-20, Leu-79 to Ser-87, Lys-90 to Gly-96, Gln-109 to Thr-121, Val-133 to Gly-139.
876798	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5887 as residues: Thr-25 to Val-31, Lys-47 to Asp-62.
876802	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5888 as residues: Leu-2 to Thr-8, Asp-15 to Gly-26, Phe-64 to Ser-70, Pro-77 to Trp-82, Pro-85 to Lys-90.
876807	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5890 as residues: Lys-12 to Ser-18, Tyr-26 to Thr-33, Leu-71 to Thr-76, Pro-102 to Ser-110, Asp-114 to Gln-119, Glu-137 to Asp-159, Gly-162 to His-172, Thr-179 to Gly-194, Ala-198 to Asp-229.
876809	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5891 as residues: Arg-7 to Lys-13, Pro-28 to Cys-34, Gly-100 to Asn-109, Cys-155 to Arg-162, Glu-214 to Gln-219, Glu-240 to Asp-246, Gly-254 to His-265.
876817	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5894 as residues: Pro-22 to Asn-28, Pro-47 to Asn-57, Glu-92 to Gly-98, Pro-120 to Ile-135, Ala-138 to Cys-155, Pro-161 to Val-181, Ala-185 to Asp-196, Val-207 to Asn-213, Asn-219 to Asn-236, Asn-242 to Asn-250, Leu-252 to Asn-274, Ala-281 to Cys-295, Pro-297 to Cys-311, Pro-317 to Asn-339, Thr-417 to Tyr-423, Gln-443 to Gly-458, Thr-471 to His-476, Thr-484 to Gln-490, Asp-497 to Trp-511.
876823	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5896 as residues: Arg-1 to Trp-23, Pro-37 to Gly-47, Gly-50 to His-56, Phe-64 to Gly-74, Pro-76 to Ala-81, Pro-84 to Gly-95, Pro-101 to Pro-112, Lys-135 to Lys-146, Lys-159 to Asp-176.
876829	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5897 as residues: Pro-51 to His-56, Glu-69 to Asn-74, Gly-190 to Lys-199.
876830	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5898 as residues: Asp-27 to Gly-39.
876842	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5902 as residues: Glu-8 to Arg-13, Leu-17 to Val-23.

876856	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5903 as residues: Glu-63 to Asn-73, Pro-114 to Tyr-122, Ser-194 to Glu-201, Ile-263 to Ser-269.
876858	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5904 as residues: Asn-1 to Val-6, Lys-9 to Gln-16, Asn-47 to Glu-53, Asn-116 to Ser-121, Pro-130 to Thr-139, His-159 to Glu-165.
876865	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5905 as residues: Leu-26 to Asp-39, Asp-47 to Arg-54, Glu-62 to Val-72.
876866	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5906 as residues: Ser-1 to Gln-8, Val-40 to Ser-49, Arg-105 to Lys-110.
876870	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5907 as residues: Ser-25 to Trp-32.
876873	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5908 as residues: Gln-21 to Met-26, Gln-50 to Lys-61.
876876	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5909 as residues: Ala-8 to Arg-14, Ile-64 to Thr-69, Val-94 to Asp-101, His-112 to Gln-117, Tyr-139 to Glu-145, Tyr-195 to Cys-208, Gly-216 to Gly-223, Asp-297 to Ser-307, Gly-378 to Leu-383, Ile-391 to Pro-404, Asn-451 to Ser-466.
876878	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5910 as residues: Pro-32 to Arg-41.
876882	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5911 as residues: Thr-4 to Gly-13, Asp-20 to Val-25, Ala-46 to Asn-65, Gly-69 to Gly-75, Pro-82 to Gly-113, Pro-119 to Pro-174, Gly-181 to Gly-187, Tyr-190 to Tyr-212.
876886	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5912 as residues: Ser-9 to Arg-22, Gln-28 to Trp-34, Gly-36 to Leu-43, Arg-45 to Trp-52, Asp-56 to Leu-61, Ala-65 to Tyr-72, Leu-102 to Gly-109, Pro-111 to Ala-116, Ala-120 to Arg-125, His-129 to Gln-134, Pro-136 to Gly-145, Pro-167 to Thr-172, Glu-232 to Lys-239, Lys-253 to Asn-258, Leu-357 to Gly-362, Leu-371 to Gly-376.
876888	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5913 as residues: Glu-31 to Asp-39.
876890	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5914 as residues: Glu-91 to Pro-100, Tyr-122 to Thr-127, Thr-168 to Val-173, Thr-210 to Asp-215, Leu-219 to Gly-224, Gly-232 to Val-237.
876892	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5915 as residues: Ser-8 to Ser-20.
876901	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5916 as residues: Tyr-130 to Glu-136, Arg-148 to His-159, Pro-214 to Leu-221, His-224 to Gly-229, Glu-238 to Glu-246, Gln-331 to Trp-343.
876904	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5918 as residues: Val-61 to Gln-69, Gln-106 to Thr-111.
876905	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5919 as residues: Arg-1 to Arg-7, Pro-29 to Lys-56, Asp-103 to Arg-108, Tyr-122 to Ser-127, Gly-219 to Glu-227, Asp-250 to Glu-255,

	Glu-294 to Pro-301, Ala-321 to Tyr-327, Arg-367 to Pro-373, Glu-396 to Asn-405, Gly-411 to Arg-418, Asn-433 to Lys-441.
876909	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5920 as residues: Ala-32 to Ala-40, Glu-93 to Phe-103, Lys-173 to Thr-189.
876912	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5921 as residues: Glu-40 to Pro-47, Lys-56 to Trp-62.
876920	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5923 as residues: Arg-1 to Gly-15, Ser-42 to Trp-51, Pro-59 to Arg-64.
876921	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5924 as residues: Tyr-1 to Leu-6.
876923	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5925 as residues: Pro-6 to Cys-14, Glu-33 to Leu-38, Val-209 to Lys-216, Pro-270 to Gln-278, His-321 to Thr-330.
876936	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5928 as residues: Ala-54 to His-67, Pro-69 to Lys-86.
876940	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5930 as residues: Ala-1 to Asp-29, Pro-51 to His-59, Asn-67 to Asp-73.
876941	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5931 as residues: Pro-16 to Arg-28.
876942	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5932 as residues: Glu-1 to Gln-6, Val-8 to Trp-15.
876943	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5933 as residues: Gly-1 to Gln-9, Asn-11 to Arg-16, Cys-28 to His-33, Pro-51 to Pro-57, Glu-66 to Glu-72, Pro-84 to Asp-89, Pro-104 to Asp-109, Glu-122 to Thr-132.
876944	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5934 as residues: Arg-3 to Gly-11.
876945	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5935 as residues: Pro-15 to Pro-24.
876946	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5936 as residues: Ser-8 to Ser-14.
876947	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5937 as residues: Gly-27 to Ala-34.
876949	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5938 as residues: Pro-5 to His-14, Arg-38 to Gln-43, Leu-80 to Arg-86.
876952	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5939 as residues: Ser-8 to Thr-18, Pro-52 to Ala-61, Pro-67 to Gly-72, Ala-81 to Thr-88, Glu-105 to Thr-120.
876953	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5940 as residues: Gly-1 to Asp-12, Ser-64 to Trp-74, Met-82 to Tyr-88, Phe-101 to Cys-106, Tyr-120 to Lys-132.
876954	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5941 as residues: Pro-1 to Ile-12, Asp-30 to Tyr-35, Leu-38 to Pro-45, Lys-54 to Thr-60, Thr-75 to Leu-80, Asp-92 to Tyr-100, Ile-133 to Thr-138, Thr-194 to Glu-199, Asp-233 to Leu-239, Met-243 to Ala-

	251, Asp-254 to Glu-261.
876957	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5942 as residues: Lys-71 to Asn-88, Ala-115 to Cys-130, Ala-175 to Arg-182.
876958	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5943 as residues: Gln-1 to Pro-8.
876963	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5946 as residues: Val-16 to Ser-21, Ala-60 to Lys-72.
876964	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5947 as residues: Thr-6 to Lys-13, Met-16 to Glu-36, Lys-59 to Phe-65, Leu-71 to Gln-77.
876966	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5949 as residues: Lys-13 to Trp-19, Ser-25 to Gln-32, Glu-53 to Gln-58, Arg-108 to Gly-113.
876967	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5950 as residues: Lys-1 to Asp-9, Arg-16 to Gly-21, Cys-51 to Val-59, Asp-65 to Ser-71, Thr-79 to Asn-90, Asn-99 to Asn-111, Ser-149 to Pro-156.
876968	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5951 as residues: Asn-44 to Tyr-49, Gly-71 to Glu-79.
876969	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5952 as residues: Arg-74 to Arg-79.
876975	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5954 as residues: Phe-12 to Ile-19, Arg-25 to Arg-31.
876976	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5955 as residues: Asn-78 to Gln-92.
876977	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5956 as residues: Asn-1 to Glu-8, Ala-38 to Gly-46, Gln-58 to Asp-71, Ala-75 to Cys-103, Met-106 to Ala-140, Gln-153 to Ile-159.
876981	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5959 as residues: Gln-40 to Lys-45.
876983	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5960 as residues: Leu-37 to Pro-42.
876984	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5961 as residues: His-5 to Thr-11, Arg-71 to Pro-77.
876985	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5962 as residues: Tyr-7 to Gly-28, Arg-38 to Asp-65, Asp-78 to Ser-90, Ser-92 to Ser-115, Asp-117 to Ser-132, Val-148 to Leu-153, Lys-155 to His-168.
876987	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5963 as residues: Lys-30 to Thr-35, Ser-49 to Tyr-55.
876989	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5964 as residues: Gly-4 to Gly-10, Glu-17 to Gly-28, Met-35 to Asp-41, Glu-79 to Gln-85, Gln-102 to Gly-110.
876992	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5967 as residues: Ser-15 to Pro-21.
876993	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5968 as residues: His-44 to Gln-52, Pro-55 to Lys-72, Ser-87 to Ser-93, Arg-105 to Leu-111, Phe-119 to Lys-124.

876994	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5969 as residues: Leu-28 to Glu-33, Met-54 to Cys-60.
876998	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5971 as residues: Glu-1 to Pro-25, Gly-30 to Ala-54, Asn-65 to Asn-82, Leu-89 to Ser-97.
877000	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5972 as residues: Ala-1 to Asn-6, Val-8 to Tyr-20.
877002	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5974 as residues: Ser-32 to Gly-53, Thr-61 to Ser-70.
877005	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5976 as residues: Gly-12 to Gly-22.
877006	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5977 as residues: Glu-8 to Ser-14, Thr-26 to Asn-40.
877007	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5978 as residues: Glu-31 to Leu-38.
877008	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5979 as residues: Ser-37 to Ser-47, Gln-58 to Thr-69, Val-72 to Gln-77, Gly-125 to Lys-155.
877010	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5981 as residues: Gly-20 to Ser-29.
877011	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5982 as residues: Ser-30 to Trp-36.
877014	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5985 as residues: Asp-1 to Arg-31, Lys-35 to Lys-44, Glu-55 to Leu-61, Thr-71 to Asp-76, Ile-82 to Asn-101.
877015	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5986 as residues: Lys-1 to His-12, Ser-26 to Thr-31, His-54 to Val-60.
877018	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5987 as residues: Gly-9 to Glu-16, Asn-46 to Glu-54.
877019	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5988 as residues: Lys-24 to Glu-38, Arg-48 to Ala-54, Gly-61 to Ala-67.
877022	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5990 as residues: Arg-10 to Gly-15, Thr-55 to Lys-64.
877024	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5992 as residues: Thr-19 to Pro-26.
877025	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5993 as residues: Gly-19 to Asn-27.
877026	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5994 as residues: Met-27 to Asn-34, Val-57 to Glu-84, Glu-86 to Ala-100, Asp-122 to Ala-128.
877027	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5995 as residues: Gln-36 to Ser-42.
877030	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 5997 as residues: Glu-30 to Ala-35, Leu-39 to Ser-44, Pro-50 to Asp-57.
877037	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6001 as residues: Gln-61 to Lys-67.

877044	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6003 as residues: Arg-22 to Gly-27, Ser-34 to Gly-39.
877046	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6004 as residues: Phe-65 to Trp-73, Arg-87 to Gly-92, Gly-107 to Lys-112, Pro-177 to Thr-186, Glu-251 to Arg-256, Phe-282 to Lys-287.
877047	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6005 as residues: Tyr-2 to Gly-8.
877049	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6006 as residues: Pro-2 to Pro-11.
877050	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6007 as residues: Ser-36 to Lys-42.
877051	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6008 as residues: Gln-5 to Arg-12, Tyr-32 to Ser-43.
877056	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6010 as residues: Pro-52 to Val-57, Asp-59 to Gln-69.
877058	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6012 as residues: Thr-13 to Pro-20.
877059	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6013 as residues: Leu-30 to Ser-38.
877063	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6014 as residues: Asp-4 to Ala-15.
877066	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6016 as residues: Gln-1 to Trp-11, Pro-47 to Tyr-53.
877067	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6017 as residues: Pro-11 to Asp-16, Arg-23 to Gln-29.
877068	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6018 as residues: Lys-26 to Arg-32.
877070	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6020 as residues: Arg-33 to Leu-40.
877071	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6021 as residues: Pro-23 to Asn-31, Leu-33 to Phe-38.
877073	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6022 as residues: Ser-1 to Ser-17.
877087	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6027 as residues: Arg-1 to Met-6, Thr-34 to Glu-54, Glu-58 to Asn-63.
877088	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6028 as residues: Thr-6 to Gly-13, Trp-20 to Thr-36.
877092	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6029 as residues: Arg-17 to Gly-23.
877093	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6030 as residues: Pro-33 to Cys-43.
877094	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6031 as residues: Pro-9 to Tyr-17, Gln-29 to Tyr-38, Ala-47 to Glu-55.
877096	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6033 as residues: Lys-9 to Ser-17.
877097	Preferred epitopes include those comprising a sequence shown in SEQ

	ID NO. 6034 as residues: Phe-34 to Ser-39, Glu-63 to Phe-74, Leu-78 to Pro-83.
877098	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6035 as residues: Lys-1 to Asp-8.
877099	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6036 as residues: Pro-10 to Gly-17, Tyr-23 to Ser-28.
877101	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6037 as residues: Asp-22 to Cys-28, Gly-87 to Leu-93, Lys-128 to Asn-151.
877105	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6039 as residues: Pro-48 to Cys-53.
877106	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6040 as residues: Gln-3 to Ile-12.
877110	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6041 as residues: Val-6 to Ala-13.
877111	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6042 as residues: Phe-56 to Asn-72, Gln-84 to Leu-93, Ser-96 to Pro-109, Pro-116 to Glu-126.
877114	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6044 as residues: Lys-13 to Lys-21.
877119	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6045 as residues: Ala-16 to Ser-22.
877120	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6046 as residues: Pro-1 to Gly-14, Gly-33 to Ser-40, Gln-80 to Ser-101.
877121	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6047 as residues: Arg-34 to Ser-40.
877123	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6049 as residues: Thr-33 to Asp-38.
877126	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6050 as residues: Gly-10 to Leu-22, Gly-47 to Lys-62.
877132	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6054 as residues: Ser-2 to Lys-8.
877133	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6055 as residues: Thr-1 to Asp-8.
877135	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6057 as residues: Leu-7 to Leu-13, Pro-15 to Cys-28, Ser-50 to Lys-56.
877137	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6058 as residues: Glu-65 to Arg-72.
877138	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6059 as residues: Lys-15 to Thr-21.
877140	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6061 as residues: Ile-45 to Phe-51.
877142	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6062 as residues: Thr-5 to Ser-12.
877143	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6063 as residues: Arg-1 to Leu-6.
877148	Preferred epitopes include those comprising a sequence shown in SEQ

	ID NO. 6067 as residues: Leu-32 to Trp-37.
877149	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6068 as residues: Lys-72 to Gln-86.
877153	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6069 as residues: Cys-40 to Cys-46.
877154	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6070 as residues: Asn-24 to Phe-29, Thr-45 to Lys-50.
877165	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6074 as residues: Arg-6 to Lys-11, His-20 to Asn-25.
877166	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6075 as residues: Tyr-1 to Arg-7.
877167	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6076 as residues: Glu-25 to Asn-34.
877168	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6077 as residues: Tyr-1 to Ile-6, Val-17 to Ser-23, Thr-35 to His-40.
877169	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6078 as residues: Pro-1 to Met-12.
877170	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6079 as residues: Ser-4 to Lys-9.
877171	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6080 as residues: Val-10 to Leu-15, Arg-34 to Leu-40.
877173	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6081 as residues: Pro-18 to Gly-31.
877174	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6082 as residues: Lys-16 to Gln-21.
877175	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6083 as residues: Glu-2 to Ser-9.
877181	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6085 as residues: Glu-16 to Glu-23.
877187	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6088 as residues: Asp-41 to Ile-50, Thr-73 to Val-89, Gln-118 to Asp-123.
877194	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6091 as residues: Gly-53 to Asp-63.
877195	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6092 as residues: Pro-17 to Ile-24, Pro-28 to Phe-34.
877200	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6093 as residues: Thr-29 to Lys-35, Asp-44 to Cys-49.
877202	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6094 as residues: Gly-17 to Ala-23, Leu-52 to Asn-58.
877205	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6095 as residues: Lys-12 to Asp-18, Leu-40 to Arg-67, Val-75 to Asp-84.
877207	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6097 as residues: Ala-19 to Arg-29.
877208	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6098 as residues: Tyr-4 to Gln-9.
877211	Preferred epitopes include those comprising a sequence shown in SEQ



	ID NO. 6099 as residues: Asp-12 to Arg-17, Asp-34 to Gln-43, Asn-78 to Glu-84, Ser-99 to Ala-105, Ser-108 to His-113, Ile-115 to Gly-122, Phe-132 to Arg-148.
877212	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6100 as residues: Gln-1 to Ser-9.
877213	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6101 as residues: Arg-42 to Gln-53, His-56 to Ala-62, Asn-73 to Pro-81.
877214	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6102 as residues: Ser-15 to Cys-23.
877218	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6104 as residues: Lys-33 to Phe-40, Pro-64 to Arg-72, Arg-105 to Gly-110.
877220	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6105 as residues: Gly-1 to Thr-14, Ala-27 to Leu-32, Pro-47 to Pro-54.
877230	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6108 as residues: Thr-1 to Asn-8.
877231	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6109 as residues: Gly-1 to Ser-20, Phe-29 to Asn-37, Asn-55 to Tyr-64, Ala-69 to Asp-78, Tyr-82 to Ala-91, Lys-100 to Glu-122.
877232	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6110 as residues: Lys-41 to Ile-47.
877233	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6111 as residues: Ile-11 to Phe-16, Tyr-27 to Pro-33.
877234	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6112 as residues: Ala-13 to His-18, Gly-24 to Thr-29, Pro-31 to Gly-39, Pro-49 to Asp-56, Trp-64 to Asp-72, Pro-74 to Asp-80.
877235	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6113 as residues: Thr-6 to Gly-12, Pro-41 to Asp-48, Gly-54 to Phe-62, His-94 to Tyr-102, Ser-108 to Gly-123, Gln-130 to Asn-136, Tyr-169 to His-175, Phe-188 to Arg-195, Trp-232 to Ile-237.
877240	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6115 as residues: His-1 to Leu-8, Ala-42 to Arg-50, His-74 to Tyr-81.
877242	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6116 as residues: Asp-25 to Asn-30.
877250	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6118 as residues: Thr-11 to Cys-22, Gly-29 to Gly-37, Arg-74 to Asn-91, Phe-110 to Pro-119, Thr-144 to Gln-149, Tyr-165 to Gly-171, Pro-190 to Ser-196.
877251	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6119 as residues: Ala-5 to Ser-11, Thr-32 to Thr-37, Gln-46 to Asp-57, Ala-70 to Gly-78.
877254	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6120 as residues: Val-50 to Tyr-55, Thr-63 to Thr-68, Phe-77 to Gly-92, Arg-112 to Lys-119.
877258	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6124 as residues: Thr-1 to Ser-6, Thr-40 to Trp-49, Asn-65 to Lys-72.

877263	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6126 as residues: Asp-1 to Ser-16, Pro-21 to Glu-26, Pro-46 to Asn-55, Thr-74 to Leu-86, Ser-96 to Asp-105.
877264	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6127 as residues: Thr-1 to Arg-6, Ser-14 to Arg-20.
877272	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6128 as residues: Ile-55 to Leu-69, Thr-84 to Pro-94, Pro-104 to His-120.
877274	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6129 as residues: Glu-50 to Pro-58, Ile-88 to Gly-97, Pro-107 to Gly-116, Gln-136 to Gly-142, Asp-164 to Glu-176.
877275	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6130 as residues: Pro-1 to Gln-19, Cys-27 to Thr-34, Ile-49 to Trp-56.
877281	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6132 as residues: Lys-17 to Thr-23.
877282	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6133 as residues: Ala-1 to Lys-7, Asp-12 to Phe-17, Ile-24 to Glu-43.
877283	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6134 as residues: Lys-18 to Ile-23.
877284	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6135 as residues: Ile-41 to Trp-46, Glu-64 to Gly-80, Glu-134 to Gly-141, Phe-143 to Ser-158, Gln-207 to Asp-212.
877285	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6136 as residues: His-1 to Leu-11.
877290	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6140 as residues: Pro-34 to Tyr-40, Ser-67 to Trp-73, Asp-103 to Phe-109, Gln-130 to Gly-135, Trp-188 to Trp-197, Leu-327 to Asn-333, Gly-401 to Asn-407, Asn-473 to Val-483, Ser-523 to Gln-529, Arg-538 to Ser-544, Ala-563 to Ser-573, Gln-581 to Thr-592.
877295	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6141 as residues: Gln-54 to Leu-66, Pro-74 to Asp-79, Val-104 to Leu-112, Asn-114 to Asn-122, Glu-141 to Lys-152, Pro-265 to Leu-271, Phe-275 to Ser-280, Glu-298 to Ala-304, Arg-317 to Leu-323, Gln-332 to Tyr-337, Gln-342 to Arg-352.
877298	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6142 as residues: Ser-60 to Gly-66.
877301	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6144 as residues: Gln-17 to Lys-24, Ala-28 to Cys-35.
877310	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6145 as residues: Met-2 to Leu-12, Ser-16 to Asp-23, Gly-38 to Lys-45.
877319	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6146 as residues: Ala-30 to Glu-44.
877321	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6148 as residues: Gln-1 to Arg-7.
877326	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6150 as residues: Thr-25 to Asp-31.

877327	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6151 as residues: Thr-3 to Ser-10.
877332	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6154 as residues: Gly-26 to Arg-43.
877333	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6155 as residues: Pro-10 to Trp-19.
877334	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6156 as residues: Ala-18 to Ala-32, Thr-52 to Ser-60.
877336	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6157 as residues: Cys-10 to Phe-17.
877340	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6160 as residues: Ser-32 to Arg-38, Ala-72 to Lys-79, Arg-103 to Phe-111.
877344	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6161 as residues: His-41 to Thr-48.
877346	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6162 as residues: Ala-66 to Gln-78.
877355	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6165 as residues: Ser-12 to His-21, Pro-59 to Asp-69.
877356	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6166 as residues: Ser-12 to His-21, Pro-59 to Glu-68.
877361	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6168 as residues: Pro-1 to Ser-7, Thr-45 to Leu-63, Arg-113 to Thr-118, Pro-172 to Gly-182.
877370	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6170 as residues: Asp-17 to Gly-23, Lys-89 to Asp-94, Lys-129 to Asp-134, Leu-195 to Glu-204, Asn-325 to Val-336.
877373	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6171 as residues: His-8 to Gly-18, Gln-56 to Arg-61, Arg-160 to Pro-170, Ala-200 to Ser-212, His-225 to Lys-231, Gly-245 to Lys-254, Tyr-257 to Tyr-277, Pro-279 to Thr-287, Pro-305 to Gly-327, Tyr-342 to Glu-348.
877375	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6172 as residues: Gln-1 to Ser-22, Lys-40 to Phe-48, Leu-52 to His-57.
877377	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6173 as residues: Ser-27 to Thr-42, Lys-71 to Lys-85, Gly-99 to Arg-105.
877378	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6174 as residues: Lys-25 to Lys-39, Gly-53 to Arg-59, Ser-172 to Val-181.
877380	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6175 as residues: Glu-7 to Arg-20, Thr-28 to Trp-44, Ser-110 to Lys-118, Pro-124 to Arg-130, Ala-137 to Asn-147.
877384	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6176 as residues: Thr-2 to Leu-9, Thr-12 to Gly-17, Glu-26 to Ser-61, Asn-70 to Cys-80, Cys-84 to Ala-91, Lys-111 to Ser-119, Asn-170 to Gln-183, Ser-203 to Lys-210, Gln-216 to Pro-229, Arg-238 to Trp-255, Ile-257 to Phe-269.

877387	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6177 as residues: Asp-12 to Tyr-18, Pro-57 to Leu-63, Glu-90 to Ala-96, Gly-102 to Val-111, Gln-123 to Ile-129, Asp-143 to Ala-150, Lys-156 to Arg-161, Thr-213 to Cys-220, Arg-256 to Tyr-261, Ser-265 to Asp-274, Asp-290 to Ser-297, Val-307 to Arg-313, Asp-324 to Lys-337, Ser-438 to Arg-443, Asn-580 to Glu-585.
877388	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6178 as residues: Gly-15 to Asn-22.
877390	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6179 as residues: Cys-7 to Gly-24, Thr-31 to Val-53, Trp-102 to Glu-108, Thr-118 to Gly-124.
877393	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6180 as residues: Glu-4 to Trp-9.
877406	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6182 as residues: Asn-1 to Glu-27, Lys-37 to Lys-46, Arg-59 to Lys-83, Asn-89 to Phe-95, His-102 to Asn-107, Ser-155 to Ile-168, Pro-175 to Gln-188, Asn-201 to Pro-211, Ala-234 to Ile-239, Asn-249 to Val-257, Pro-261 to Gly-275.
877408	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6183 as residues: Gln-1 to Pro-16, Pro-21 to Pro-30, Gly-47 to Gly-65, Tyr-78 to Leu-86, Glu-88 to Pro-104, Glu-118 to Ala-131, Ala-143 to Trp-150, Asp-152 to Ser-157, Ser-180 to Trp-187, Ser-190 to Pro-197, Ala-211 to Asn-219, Asp-252 to Leu-257, Thr-287 to Val-295.
877411	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6184 as residues: His-20 to Gln-25, Asn-36 to Ser-56.
877630	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6186 as residues: Gln-40 to Phe-45.
878274	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6191 as residues: Pro-6 to Trp-14, Tyr-19 to Leu-26, Pro-56 to His-66, Tyr-70 to Arg-80, Thr-83 to Leu-100, Cys-107 to Phe-112, Lys-137 to Arg-148, Pro-155 to Leu-162.
878374	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6192 as residues: Arg-20 to Leu-28, Phe-57 to Arg-79.
878403	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6193 as residues: Ser-2 to Thr-8.
878433	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6194 as residues: Asn-17 to His-24, Pro-97 to Glu-111.
878436	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6195 as residues: Ser-18 to Thr-25.
878560	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6196 as residues: Thr-33 to Pro-40, Asp-62 to Glu-67, Ser-104 to Phe-109.
878800	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6197 as residues: Leu-24 to Arg-30.
878909	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6198 as residues: Pro-14 to Ser-19, His-40 to Trp-49.
878917	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6199 as residues: Glu-26 to Thr-32, Ser-41 to Pro-46, Leu-107 to Glu-115.
879009	Preferred epitopes include those comprising a sequence shown in SEQ

	ID NO. 6201 as residues: Trp-60 to His-68, Pro-99 to Gly-106.
879234	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6202 as residues: Ser-46 to Thr-64, Thr-69 to Gly-79, Ser-102 to Arg-115, Leu-137 to Thr-144, Ala-146 to Pro-153, Pro-163 to Arg-180, Cys-209 to His-229.
879386	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6203 as residues: Pro-3 to Cys-11, Pro-70 to Phe-83, Ser-101 to Leu-107, Glu-110 to Pro-116, Lys-153 to Arg-158.
879484	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6204 as residues: Lys-44 to His-50, Thr-110 to Pro-116, Lys-178 to Gln-183, Pro-196 to Lys-205, Arg-214 to Thr-220, Asp-295 to Leu-301, Pro-316 to Glu-324, Glu-331 to Tyr-336, Gly-347 to Val-354.
879595	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6205 as residues: Pro-7 to Ser-15, Gly-49 to Ala-55, Gln-74 to Pro-86.
879661	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6206 as residues: Arg-10 to Arg-20, Gly-48 to Val-53, Glu-69 to Asp-76, Glu-116 to Glu-122, Glu-132 to Trp-143, Asp-166 to Asn-175, Arg-191 to Asn-197, Gln-205 to Gly-233, Lys-235 to Ala-274.
880071	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6208 as residues: Ser-36 to Ser-41, Ser-77 to Gln-83.
880074	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6209 as residues: Ser-7 to Gln-12, Gly-25 to Gly-31, Gly-71 to Gly-84, Leu-147 to Glu-164, Trp-172 to Leu-180.
880418	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6210 as residues: Ser-56 to Val-64, Lys-66 to Cys-73.
880649	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6212 as residues: His-28 to Gly-35, Gln-141 to His-147, Glu-232 to Gln-237, Ala-264 to Glu-269.
880694	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6213 as residues: Glu-21 to Glu-27, Arg-34 to Ile-41, Leu-83 to Ala-93, Pro-120 to Glu-130.
880747	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6214 as residues: Pro-16 to Phe-23, Gln-45 to Cys-50, Asn-66 to Asn-73, Ile-98 to His-105, Pro-183 to Pro-190, His-206 to Ser-212, Thr-295 to Pro-316, Ser-364 to Trp-370, Gln-385 to Asn-396.
880994	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6216 as residues: Ile-32 to Tyr-47.
881105	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6220 as residues: Arg-9 to Gln-35, Ile-113 to Gly-120.
881219	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6221 as residues: Ser-17 to Thr-25, Lys-39 to Thr-48, His-53 to Arg-60, Pro-67 to Asn-72, Thr-157 to Phe-165, Gln-212 to Glu-221, Gly-241 to Ser-260, Thr-294 to Phe-300, Ile-319 to Lys-328, Ser-338 to Lys-343, Leu-383 to Phe-388, Gly-430 to Asp-441, Ser-466 to Glu-475, Gln-541 to Pro-554, Val-583 to Thr-595, Leu-598 to Arg-603, Gln-608 to Gln-614, Asp-639 to Asn-648, Asp-654 to Phe-667, Lys-676 to Val-704, Lys-725 to Ser-731, Pro-739 to Ala-763, Asp-772 to Gly-778.
881221	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6222 as residues: Ile-1 to Lys-11, Asn-59 to Phe-65, Phe-70 to

	Asn-79, Lys-156 to Glu-162, Pro-168 to Asp-175, Pro-213 to Leu-219, Asn-246 to Leu-266, Ser-275 to Asp-286, Gln-334 to Leu-345.
882330	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6223 as residues: Arg-20 to Ser-27, Glu-40 to Glu-50.
882715	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6224 as residues: Glu-4 to Asn-14, Gln-66 to Gly-73, Leu-88 to Leu-97, Val-101 to Gln-107.
882729	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6225 as residues: Arg-7 to Gly-12, Met-42 to Ser-58, Gln-65 to Asn-73, Glu-91 to Ala-99, Pro-103 to Tyr-109, Arg-174 to Ala-179, His-189 to Gln-196, Asn-208 to Pro-219.
882762	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6226 as residues: Arg-8 to Asn-30, Ser-37 to Gln-42, His-74 to Leu-82, Arg-92 to His-97, Gln-114 to Leu-119, Gly-131 to Gly-137.
883172	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6227 as residues: His-1 to Arg-10.
883371	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6230 as residues: Asp-24 to Trp-41, Tyr-106 to Lys-114, Ala-161 to Glu-167, Pro-182 to Leu-190, Ala-193 to Pro-200, Leu-205 to Tyr-212, Pro-240 to Lys-252, Pro-254 to Lys-262, Leu-293 to Leu-303.
883753	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6231 as residues: Gly-156 to Met-161, Cys-186 to Lys-197.
883799	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6232 as residues: Ser-1 to Glu-18, Val-79 to Glu-88.
883945	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6233 as residues: Ser-21 to Arg-28.
883971	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6234 as residues: Ser-19 to Gly-24, Gly-54 to Ser-59.
884038	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6235 as residues: Pro-18 to Asn-25, Ala-44 to Asn-50, Arg-56 to Lys-64, Gly-76 to Gly-85, Lys-92 to Leu-98, Gly-116 to Gly-121, Gln-132 to His-138, Thr-159 to Asp-167.
884095	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6236 as residues: Arg-50 to Thr-56, Pro-116 to Arg-121, Lys-129 to Phe-136, Glu-139 to Leu-144, Lys-156 to Leu-162.
884161	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6237 as residues: Asn-16 to Tyr-23, Glu-47 to Trp-56, Ser-90 to Lys-96, Ala-126 to Glu-136, Pro-138 to Lys-149, Glu-181 to Gly-186, Trp-208 to Lys-219, Arg-347 to Ala-358, Leu-370 to Lys-381, Thr-408 to Ile-415, Pro-425 to Leu-437, Gln-450 to Asn-455.
884168	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6238 as residues: Glu-94 to Tyr-102, Pro-105 to Asn-112, Thr-121 to Gly-137, Glu-157 to Gly-162, Glu-179 to Phe-186, Cys-211 to Thr-222, Ser-240 to Lys-245, Thr-262 to Asn-279, Arg-288 to Pro-306, Asn-332 to Gln-339, Ser-375 to Leu-382, Arg-408 to Gly-415, Asp-423 to Thr-428, Ser-471 to Asn-476, Pro-545 to Gly-551, Ser-606 to Pro-616, Ala-662 to Gly-667, Thr-675 to Tyr-682, Glu-714 to Trp-720, Pro-722 to Val-732, Pro-787 to Thr-795, Arg-811 to Glu-816, Gln-880 to Thr-891.
884215	Preferred epitopes include those comprising a sequence shown in SEQ

	ID NO. 6239 as residues: Met-10 to Gln-18, Pro-23 to Leu-31, Glu-46 to Arg-51, Phe-135 to Pro-143, His-218 to Asp-227, Pro-244 to Met-250, Lys-258 to Asp-263, Pro-266 to Leu-276, Pro-286 to Asp-293.
884529	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6241 as residues: Arg-8 to Ser-15, Gln-89 to Gln-95, Leu-109 to Tyr-115, Glu-126 to Arg-133.
884719	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6242 as residues: Arg-4 to Ala-10, Arg-40 to Gly-45, Asp-86 to Tyr-91, Pro-100 to Phe-113.
885350	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6243 as residues: Arg-15 to Pro-21, Cys-29 to Cys-41, Pro-52 to Leu-63, Pro-98 to Ser-108, Tyr-113 to Cys-118, Cys-124 to Asp-129, Cys-180 to Gln-187, Cys-247 to Cys-259, Ser-279 to Trp-286, Cys-296 to Cys-302, Pro-304 to Cys-309, Ser-343 to His-348, Gln-367 to Lys-373.
885476	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6244 as residues: Lys-28 to Glu-51, Lys-123 to Leu-133.
885484	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6245 as residues: Arg-1 to Glu-10, Gly-22 to Gly-27.
886505	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6248 as residues: Ser-64 to Gln-70, Ala-75 to Leu-80, His-82 to Gly-87, Ser-121 to Lys-137.
886788	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6250 as residues: Lys-60 to Lys-65, Lys-78 to Lys-94, Leu-116 to Gln-123.
887098	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6252 as residues: Pro-1 to Ala-9, Val-56 to Val-63, Gly-86 to Glu-91.
887114	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6253 as residues: Glu-38 to Arg-52, Ser-56 to Val-62.
887155	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6254 as residues: Thr-3 to Pro-9, Pro-18 to Gly-25, Ala-30 to Gly-36, Arg-41 to Asp-56, Ala-60 to Pro-68, Met-99 to Leu-128, Thr-143 to Phe-157.
887172	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6255 as residues: Cys-5 to Ser-14, Val-83 to Ser-88.
887192	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6256 as residues: Glu-29 to Cys-39, Val-46 to Ser-52, Asn-58 to Gly-65, Cys-68 to His-82, Tyr-84 to Gly-94, Leu-122 to Trp-138, Ala-158 to Leu-170, Gly-175 to Arg-182, Tyr-203 to Ser-210, Gly-246 to Met-258, Arg-288 to Gln-296.
887280	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6257 as residues: Asn-1 to Gly-15, Pro-18 to Asn-28, Gln-35 to Glu-40, Arg-60 to Arg-69.
887399	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6258 as residues: Pro-8 to Gly-18, Ala-94 to Gly-99, Asn-107 to Arg-112, Phe-161 to Arg-166, Thr-196 to Phe-201, Tyr-309 to Gly-316, Leu-326 to Arg-331.
887535	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6261 as residues: Glu-26 to Gly-32, His-73 to Arg-79.

887803	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6262 as residues: Ala-1 to Gln-7, Lys-24 to Ser-30, Pro-44 to Ser-49, Ser-99 to Ser-105.
887857	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6263 as residues: Pro-1 to Ser-6, Pro-25 to Cys-31, Arg-142 to Lys-150, Pro-223 to Gly-230, Ala-233 to Val-247.
887892	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6264 as residues: Ser-10 to Ile-15, Val-60 to Arg-66, Tyr-114 to Leu-128.
887936	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6265 as residues: Leu-1 to Cys-6, Lys-46 to Thr-53, Ala-56 to Glu-63.
887996	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6266 as residues: Ala-1 to Gly-6, Pro-9 to Pro-24, Gln-70 to Tyr-82, Glu-127 to Ser-134.
888051	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6268 as residues: Trp-45 to Trp-56, Thr-58 to Asp-73, Thr-126 to Arg-133, Phe-148 to Ser-155, Val-208 to Gly-223.
888153	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6270 as residues: Gly-5 to Leu-12, Tyr-18 to Asp-25, Ile-88 to Ala-125, Ser-129 to Tyr-141, Gln-191 to Gln-196, Thr-290 to Asn-296, Thr-301 to Thr-309, Leu-360 to Ala-365, Leu-367 to Gly-378, Pro-398 to Gly-418, Pro-443 to Gly-454.
888402	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6272 as residues: Leu-11 to Asn-16, Gly-164 to Glu-171, Leu-181 to Ser-186, Asp-193 to Ser-201, Glu-222 to Leu-229, Gln-238 to Tyr-245, Leu-256 to Asp-267, Gly-286 to Gln-301, Ser-311 to Ala-319, Glu-345 to Gly-351, Phe-361 to Asp-367, Thr-436 to Arg-443, Ile-460 to Gln-467, Gln-510 to Glu-533, Ala-541 to Ala-548, Gln-561 to Glu-571, Leu-581 to Ala-590, Phe-639 to Ser-652.
888708	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6275 as residues: Ile-27 to Val-33, Ala-63 to Ser-69, Pro-128 to Ser-135.
888720	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6276 as residues: Phe-34 to Glu-44, Glu-111 to Gly-122.
888950	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6278 as residues: Lys-56 to Gln-64, Pro-172 to Gly-183, Asp-208 to Asn-216, Glu-227 to Gly-232, Pro-259 to Arg-269, Asn-281 to His-286.
889136	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6279 as residues: Arg-1 to Lys-14, Glu-19 to His-26.
889263	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6280 as residues: Gly-18 to Gly-30.
889299	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6281 as residues: Leu-5 to Ser-12.
889300	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6282 as residues: Glu-15 to Gly-22, Asn-45 to Pro-51, Glu-141 to Asn-146, Asp-154 to Gln-163, Glu-185 to Ser-191, Arg-200 to Pro-206, Asp-220 to Asn-225, Glu-231 to Asn-237, Ser-262 to Gly-269, Pro-276 to Ala-281, Glu-314 to Thr-320, Ser-416 to His-424, Gly-426 to



	Ala-438, Pro-445 to Phe-450, Arg-464 to Leu-469.
889323	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6283 as residues: Pro-1 to Gly-11, Pro-13 to His-42, Arg-55 to Arg-66, Arg-84 to Gly-91, Gly-96 to Pro-101, His-112 to Pro-118.
889368	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6284 as residues: Pro-1 to Asn-9.
889467	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6285 as residues: Asp-10 to Asp-19, Ala-63 to Asp-68.
889494	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6286 as residues: Arg-1 to Ser-6.
889700	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6287 as residues: Ala-4 to Gly-14, Pro-20 to Cys-27, Leu-88 to Gly-94, Gly-106 to Lys-120, Pro-144 to Leu-150.
889782	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6288 as residues: Val-103 to Ser-108.
889954	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6289 as residues: Glu-21 to Tyr-33, Ile-90 to Ser-95, Pro-103 to Val-111, Ala-133 to His-140, Asn-153 to Trp-159, Gln-187 to Glu-192, Lys-214 to Arg-224.
889994	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6291 as residues: Ala-1 to Gln-7, Lys-24 to Ser-30, Pro-44 to Ser-49.
890666	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6292 as residues: Pro-36 to Trp-51, Arg-96 to Gly-104, Glu-134 to Asn-144, Pro-203 to His-210, Cys-228 to Asp-235, Gly-278 to Tyr-284, Ser-309 to Pro-316, Thr-325 to Ala-333, Ser-337 to Glu-357, Tyr-390 to Gly-403, Tyr-409 to Gly-421.
890698	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6293 as residues: Ser-37 to Asp-43.
890776	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6296 as residues: Ser-4 to Trp-13, Pro-276 to Ala-282, Ala-341 to Arg-347.
890801	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6297 as residues: Asn-9 to Arg-15.
890820	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6298 as residues: Arg-110 to Asp-115, Leu-185 to Gln-193, Ser-201 to Asp-208, Arg-215 to Arg-221, Arg-242 to Tyr-250, Thr-315 to Thr-320, Lys-359 to Val-367, Ser-395 to Tyr-401, Met-406 to Lys-411.
891264	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6302 as residues: Asp-1 to Gly-15, Ala-22 to Tyr-28.
891305	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6303 as residues: Asp-39 to Tyr-44, Thr-46 to Asn-55, Ser-78 to Ala-87.
892113	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6305 as residues: Gln-15 to Gln-22, Leu-216 to Lys-223.
892177	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6306 as residues: His-8 to Gly-18, Glu-100 to Asn-107, Glu-121 to Asn-126, Lys-128 to Ala-140, Ala-180 to Arg-186, Phe-230 to Thr-238, Pro-325 to His-341.

892367	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6308 as residues: Ser-31 to Gln-40.
892563	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6310 as residues: Arg-1 to Gly-23.
892820	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6311 as residues: Pro-8 to Thr-19.
893457	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6313 as residues: Lys-12 to Thr-18.
893827	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6314 as residues: Glu-37 to Asn-42, Ser-48 to Thr-54, Pro-101 to Glu-106.
893842	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6315 as residues: Asp-1 to Tyr-7, His-71 to Pro-78.
893866	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6316 as residues: Ala-12 to Lys-28, Ala-88 to Gly-95, Thr-100 to Cys-109.
894012	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6318 as residues: Ser-39 to Gln-48, Ala-61 to Pro-69.
894051	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6319 as residues: Arg-52 to Glu-66.
894121	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6320 as residues: Gly-28 to Ser-36, Trp-38 to Pro-60, Pro-98 to Thr-104, Pro-113 to Tyr-118, Phe-133 to Gly-140, Pro-186 to Leu-192, Glu-239 to Gly-246, Pro-257 to Lys-269, Lys-273 to Lys-279.
894341	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6321 as residues: Asn-18 to Asp-29.
894631	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6323 as residues: Met-1 to Gly-17, Pro-22 to Gly-30, Gly-72 to His-82, Leu-89 to Lys-95.
894806	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6324 as residues: Leu-99 to Ser-104.
894811	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6325 as residues: Asn-1 to Asn-8, Phe-49 to Asn-54, Glu-57 to Ser-63.
894820	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6327 as residues: Leu-8 to Gly-15.
894824	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6328 as residues: Ser-8 to Asp-13, Arg-19 to Ser-25.
894827	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6329 as residues: Arg-5 to Lys-11.
894830	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6330 as residues: Thr-102 to Gln-132.
894831	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6331 as residues: Ile-132 to Gly-138, Phe-149 to Thr-154.
894832	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6332 as residues: Pro-6 to Lys-17, Ser-66 to Pro-72, Pro-84 to Val-93.
894842	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6333 as residues: Ser-65 to Asp-70.

894878	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6334 as residues: Arg-9 to Trp-27, Pro-39 to Asn-44.
895122	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6335 as residues: Thr-11 to Pro-34, Asn-151 to Glu-157, Asp-302 to Phe-309, Tyr-333 to Gly-339.
895303	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6336 as residues: His-1 to Asp-9, Leu-11 to Glu-24, Pro-59 to Gln-65.
895372	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6337 as residues: Asn-7 to Ser-19, Arg-81 to Asn-94, Lys-99 to Asp-104.
895675	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6338 as residues: Asn-47 to Gly-52, Pro-67 to Asp-72, Pro-100 to Leu-105, Ser-115 to Asp-120, Leu-128 to Asn-135.
895927	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6340 as residues: Asn-3 to Trp-18, Gly-30 to Ser-35, Pro-41 to Ser-51, Ser-132 to Tyr-143.
896008	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6341 as residues: Pro-5 to Thr-28, Val-65 to Gly-71, Thr-82 to Gly-96.
897234	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6342 as residues: Ala-1 to Asp-10, Leu-24 to Phe-30, Pro-36 to Ser-42.
897524	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6343 as residues: Thr-1 to Cys-24, Lys-26 to Ser-32, Gln-83 to Thr-91, Thr-131 to Gly-137, Lys-170 to Asp-177, Asp-190 to Pro-198.
897898	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6344 as residues: Pro-23 to Arg-31, Gln-79 to Gln-85, Cys-93 to Cys-107.
898087	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6345 as residues: Ser-49 to Asp-59, Arg-69 to Tyr-87.
898136	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6346 as residues: Ser-12 to Ser-19, Ala-47 to Lys-52, Arg-96 to His-105.
898192	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6348 as residues: His-9 to Ile-14, Tyr-58 to Phe-64, Thr-75 to Phe-81.
898355	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6349 as residues: Pro-5 to Gly-18, Pro-21 to Asn-31, Gln-38 to Glu-43, Arg-63 to Arg-78.
898427	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6351 as residues: Gly-6 to Ile-11, Pro-13 to Arg-38, Glu-68 to Lys-74, Asp-88 to Ser-93, Glu-122 to Gly-130, Glu-145 to Glu-150, Thr-156 to Asp-174, Glu-200 to Arg-208, Ala-226 to Leu-240.
898541	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6352 as residues: His-1 to Leu-11, Arg-37 to Ile-43, Gln-111 to Pro-120, Asp-133 to Asn-138, Arg-159 to Cys-165, Val-241 to Lys-265, Glu-326 to Tyr-331, Pro-365 to Asn-382, Asn-418 to Asp-430, Ala-434 to Ser-441, Tyr-479 to Gly-496, Pro-498 to Ser-505.
898651	Preferred epitopes include those comprising a sequence shown in SEQ

	ID NO. 6353 as residues: Ser-6 to Pro-11, Pro-27 to Glu-32, Pro-65 to Trp-71, Val-208 to Pro-215, His-220 to Thr-225.
898946	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6355 as residues: Thr-4 to Arg-14, Glu-34 to Pro-46.
899130	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6356 as residues: Pro-10 to His-19, Leu-47 to Tyr-55, Phe-93 to Gly-105, Ser-220 to Trp-227, Phe-295 to Thr-301, Thr-309 to Trp-315, Arg-326 to Phe-334, Arg-458 to Pro-466.
899224	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6357 as residues: Ser-3 to Gly-28, Gly-46 to Pro-56, Gly-70 to Ile-92, Gln-102 to Ser-117, Ala-123 to Pro-129, Pro-135 to Leu-140, Pro-150 to Asp-158, Pro-165 to Pro-177, Gln-188 to Asp-205, Ile-230 to Arg-245, His-251 to Trp-260, Asp-262 to Cys-267, Asn-296 to Arg-307, Glu-322 to Pro-330, Ile-351 to Asn-357, Asp-363 to Leu-369, Glu-386 to Phe-391, Lys-415 to Ser-420.
899632	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6358 as residues: Thr-11 to Ser-16, Gly-25 to Asn-40.
899661	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6360 as residues: His-8 to Gly-18, Pro-35 to Trp-41, Arg-51 to Asp-64, Asp-69 to Gln-74, Gly-83 to Asn-96, Pro-107 to Lys-116, Glu-149 to Ser-171, Ile-177 to Ile-186.
899776	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6361 as residues: Met-36 to Arg-49, Pro-72 to Gly-82, Glu-89 to Gly-96, Tyr-129 to Thr-135.
899885	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6363 as residues: His-65 to Gly-74, Asp-85 to Ser-97, Leu-133 to Glu-138, Glu-144 to Asp-153, Arg-170 to Ser-175, Gly-184 to Arg-189, Gln-202 to Tyr-208.
899913	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6364 as residues: Lys-1 to Tyr-16.
900015	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6365 as residues: Lys-23 to His-36, Asp-52 to Leu-68.
900162	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6366 as residues: Gly-1 to Leu-9, Gly-48 to Gln-53, Cys-74 to Pro-79, Thr-118 to Val-128.
900555	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6368 as residues: His-8 to Gly-18, Cys-131 to Gly-136, Thr-198 to Asn-203, Pro-231 to Asp-236.
900696	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6369 as residues: Arg-11 to Ser-23, Arg-72 to Pro-84, Asp-90 to Ser-103, Gly-172 to Glu-179, Pro-190 to Phe-197, Val-210 to Arg-216, Pro-228 to Leu-233.
900777	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6370 as residues: Pro-5 to Arg-16, Thr-21 to Gly-27, Ser-35 to Gln-40, Arg-103 to Lys-112, Gly-172 to Pro-188, Gln-190 to Met-198.
900784	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6371 as residues: Gln-36 to Trp-52, Gly-164 to Gly-175, Ile-210 to Arg-215, Asn-417 to Val-422, Val-426 to Gln-431, Val-439 to Gly-444, Lys-470 to Leu-481, Phe-500 to Ser-511, Met-553 to Gly-563, Glu-691 to Thr-700, Ile-714 to Gly-723, Ala-750 to Gly-762, Leu-788 to

	Phe-794, Ser-798 to Gln-803, Thr-811 to Lys-816, Ser-824 to Phe-835, Thr-882 to Glu-892, Leu-901 to Gln-907, Gln-937 to Met-944.
900838	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6372 as residues: Pro-9 to Gly-15, Pro-47 to Pro-69, Pro-113 to Cys-122.
900966	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6374 as residues: Arg-34 to Gly-42, Gly-53 to Ser-59, Ala-74 to Gly-81, Glu-89 to Gly-103, Gly-108 to Gly-113, His-120 to Gly-223, Asp-225 to Gly-243, Pro-247 to Gly-312, Gly-317 to Asp-322.
901111	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6377 as residues: Pro-17 to Asp-36, Pro-102 to Glu-108, Pro-122 to Lys-128, His-150 to Gly-155, Asn-162 to Tyr-168, Pro-186 to Gln-193, Ser-205 to Pro-211, Gln-305 to Gly-317.
901128	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6379 as residues: Pro-1 to Gly-8, Pro-38 to Pro-45, Thr-103 to Ser-109, Cys-112 to Trp-119, Ala-201 to His-210, Glu-230 to Asn-241, Trp-263 to Ala-269.
901202	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6380 as residues: Pro-1 to Leu-17, Gly-36 to Gly-49.
901253	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6381 as residues: Gly-13 to Met-26, Arg-34 to Gly-39, Ile-60 to Ser-80, Ala-85 to Thr-98.
901276	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6382 as residues: Gln-1 to Arg-24, Gln-41 to Ala-48, Ser-70 to Gly-82, Glu-104 to Phe-112, Lys-126 to Ser-132, Pro-276 to Ile-281.
901333	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6383 as residues: Gln-48 to Lys-64, Glu-175 to Thr-183.
901375	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6384 as residues: Pro-3 to Lys-8, Phe-43 to Gly-51, Lys-55 to Ala-62, Ser-92 to Gln-98, Asp-106 to Trp-113, Ser-125 to Asn-134, Ser-150 to Phe-160.
901421	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6386 as residues: Arg-29 to Leu-38, Lys-47 to Arg-53, Asp-70 to Thr-75, Glu-116 to Leu-124, Gln-134 to Ser-143, Ser-158 to Trp-163, Pro-168 to Asp-180.
901472	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6387 as residues: Arg-1 to Val-7, Ala-156 to Phe-162.
901473	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6388 as residues: Leu-39 to Ile-47, Val-92 to Arg-98, Tyr-146 to Leu-160, Asp-185 to Phe-192, Phe-195 to Gly-207.
901494	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6389 as residues: Pro-11 to Trp-16, Gln-25 to Ser-37, Pro-99 to Gly-104, Pro-109 to Gly-115, Trp-201 to Thr-209.
901515	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6390 as residues: Gln-46 to Leu-51, Asp-58 to Asn-65, Lys-70 to Gln-75, Pro-111 to Thr-117, Gly-176 to Gly-185, Asp-205 to Gly-213, Thr-247 to Ile-263, Leu-269 to Lys-279.
901567	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6391 as residues: Phe-3 to Ala-8, Pro-17 to Gly-24, Asn-162 to Gln-179, Asn-195 to Asp-201, Glu-207 to Leu-213.

901578	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6392 as residues: Leu-1 to Glu-13, Ile-34 to Arg-40, Lys-46 to Arg-57, Ala-77 to Ile-88, Pro-103 to Asp-111, Phe-127 to Ser-138.
901621	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6393 as residues: Gln-7 to Gly-12, Leu-60 to Pro-65, Arg-85 to Lys-99, Ser-132 to Pro-145, Pro-150 to Asp-155, Pro-183 to Asn-193, Arg-200 to Tyr-206.
901875	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6394 as residues: Gly-13 to Met-26, Arg-34 to Gly-39, Ile-60 to Ser-80, Ala-85 to Thr-98, Asn-109 to Val-140, Lys-150 to Thr-157, Gly-174 to Ala-201, Thr-204 to Lys-212, Thr-237 to Gly-243, Pro-251 to Pro-261, Ala-263 to Lys-277, Phe-281 to Arg-286, Arg-333 to Asp-341, Glu-407 to Asp-412, Gly-424 to Gly-430, Gly-570 to Trp-583, Gln-614 to Gly-619.
HCRMU56 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6396 as residues: Leu-7 to Leu-13, Pro-15 to Gln-27.
HKCSA70R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6398 as residues: Leu-29 to Val-34, Gln-42 to Gly-52.
HWLOB10 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6399 as residues: Gly-49 to Pro-54.
HCQCG26R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6400 as residues: Gly-1 to Asp-6, Asp-16 to Ser-21, Val-36 to Cys-43, Ser-51 to Leu-60, Ile-65 to Lys-70.
HOENF69R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6404 as residues: Ala-15 to Ser-32, Ser-34 to Gly-43, Thr-57 to Gly-65.
HWLQY33 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6406 as residues: Gln-17 to Lys-22.
HCRNF08R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6407 as residues: Arg-1 to Arg-13, Asn-33 to Arg-39.
HKCSZ69R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6408 as residues: Thr-32 to Lys-37.
HCQAG23 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6409 as residues: Arg-22 to Thr-28.
H2LAF75R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6411 as residues: Gly-1 to Ser-6.
H2LAT73R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6413 as residues: Thr-3 to Ser-10.
HUUAQ45 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6422 as residues: Arg-13 to Asn-22, Lys-42 to Glu-48.
HWLWQ51 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6423 as residues: Ala-18 to Asn-24, Thr-65 to Arg-71, Val-84 to Thr-96.
HKLAB44R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6424 as residues: Val-7 to Trp-19, Ser-73 to Ser-79, Lys-86 to Ser-94.
H2CBA06R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6425 as residues: Ala-12 to Asp-20, Glu-30 to Arg-40, Gln-51 to Arg-57, Arg-79 to Tyr-88.

HCNAH60 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6427 as residues: Arg-19 to Gly-32.
HWMBJ68 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6432 as residues: Glu-10 to Gly-16, Asp-62 to Arg-69.
HELGR96R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6435 as residues: Leu-31 to Gln-39.
HCRQM72 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6437 as residues: Asn-5 to Lys-14, Glu-25 to Gly-33, Arg-48 to Thr-74.
HWLMH52 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6440 as residues: Glu-24 to Leu-30.
H2CBU03R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6441 as residues: Thr-2 to Ser-9.
HCQDR91R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6443 as residues: Gly-14 to Arg-19.
HWMBN34 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6444 as residues: Lys-7 to Thr-12, Pro-25 to Lys-30, Leu-38 to Asp-43, Ser-84 to Ala-95, Asp-108 to Ser-117.
HCRNF81R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6447 as residues: Pro-12 to His-17, Gln-57 to Asp-62, Thr-79 to Lys-101, Thr-117 to Ser-129.
HOHCI31R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6448 as residues: Leu-16 to Ser-22, Lys-24 to Glu-38.
HSKKC10R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6449 as residues: Glu-4 to Gly-10.
H2CBC52R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6452 as residues: Pro-18 to Ser-30, Pro-37 to Pro-43.
HWLMC24 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6454 as residues: Pro-4 to Gly-34.
HWLUR40 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6455 as residues: Phe-3 to Lys-12.
HHAOD46 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6457 as residues: Lys-23 to Ala-40, Pro-67 to Ala-72, Val-102 to Thr-110.
HCYBA83R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6458 as residues: Trp-13 to Ile-21, Pro-59 to Thr-68, Ala-85 to Lys-92, Thr-102 to Gly-113.
IICROZ77R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6459 as residues: Asp-1 to Arg-8, Lys-13 to Leu-18, Gly-32 to Glu-49, Lys-60 to Ala-75, Ser-84 to Asp-99, Glu-107 to Ser-119, Ala-132 to Gly-141.
HCQCP20R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6461 as residues: Leu-18 to Gln-25, Lys-37 to Phe-45.
HWLNF84 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6463 as residues: Lys-17 to Asn-22, Glu-31 to Lys-36, Gln-38 to Arg-44, Thr-81 to Thr-88.
HCRQI10R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6468 as residues: Asp-56 to Lys-63, Lys-78 to Asn-86, Phe-92 to Lys-99.

HULCD94R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6470 as residues: Lys-7 to Thr-13, Asp-24 to Thr-30, Gly-39 to Glu-52, Leu-70 to Arg-76, Phe-87 to Tyr-92.
HHMMF84 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6471 as residues: Lys-30 to His-37.
HCRPO08R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6472 as residues: Val-33 to Lys-38.
HWLMQ74 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6475 as residues: Pro-9 to Gly-21.
H2LAB80R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6478 as residues: Thr-14 to Val-32.
HCQDO33 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6480 as residues: Trp-10 to Gly-18, Arg-34 to Pro-39.
HKAFL06R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6482 as residues: Pro-1 to Gly-14, Cys-18 to Gly-24, Ala-39 to Arg-55, Gly-63 to Glu-76, Gln-106 to Arg-115.
HWLOO35 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6486 as residues: Gly-1 to Gly-7, Arg-13 to Glu-19.
HWLVL77 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6487 as residues: Arg-13 to Gly-40.
HBJMG15R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6489 as residues: Ser-14 to Glu-27, Ile-40 to Ile-54.
H2CBH29R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6490 as residues: Ser-16 to Glu-21.
H2LBB21R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6494 as residues: Phe-50 to Tyr-55, Thr-63 to Trp-69, Pro-74 to Arg-80.
H2LAT69R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6495 as residues: Thr-2 to Ser-11.
HLWCJ40R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6496 as residues: Tyr-28 to Pro-40.
HOGDQ57 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6498 as residues: Pro-1 to Gln-8, Met-20 to Leu-26, Gly-42 to Ser-49, Ile-63 to Pro-73, Gly-80 to Ala-87.
HWLQM12 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6499 as residues: Pro-45 to Gly-52.
H2CBG89R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6501 as residues: Met-2 to Asp-31, Leu-67 to Asp-74, Gly-93 to Ser-98.
HWLWQ68 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6502 as residues: Ser-21 to Glu-38.
HCYBM79 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6503 as residues: Glu-11 to Lys-22, Asp-31 to Trp-50.
HMUBO53 RA	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6504 as residues: Glu-1 to Asp-6, Asn-92 to Leu-97.
HWLVN81 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6506 as residues: Arg-6 to Val-14.
HWLRV71 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6507 as residues: Asp-34 to Pro-45.



HDPMJ48R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6511 as residues: Thr-1 to Trp-14, Lys-27 to Leu-44, Glu-59 to Arg-73, Lys-87 to Phe-95.
HWLNJ72R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6512 as residues: Ala-21 to Pro-30, Thr-43 to Glu-51.
HOFME52 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6513 as residues: Pro-7 to Phe-14, Glu-22 to Lys-28, Ala-31 to Glu-39, Lys-47 to Asp-54.
HCRMG55 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6515 as residues: Pro-4 to Gly-10, Lys-28 to Thr-37, Glu-45 to Glu-55.
HCRNZ49R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6516 as residues: Pro-1 to Ala-14.
H2LAD43R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6518 as residues: Gly-1 to Ser-6, Pro-20 to Trp-31.
HCQCB53R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6522 as residues: Pro-8 to Asn-18.
HCQCL32R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6525 as residues: Arg-3 to Asn-18.
HCQCP47R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6526 as residues: Thr-4 to Ser-11.
HCQDC76R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6527 as residues: Asp-1 to Lys-6, Lys-11 to Ser-17.
HCQDH59 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6528 as residues: Gly-1 to Gly-8.
HCQDK53 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6531 as residues: Gly-1 to Gly-8.
HCQDP62R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6535 as residues: Gly-1 to Gly-8.
HKCAA76 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6543 as residues: Ser-31 to Tyr-36, Pro-64 to Gly-72.
HCRNF45R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6546 as residues: Pro-8 to Glu-13, Pro-27 to Pro-33.
HCROB90R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6555 as residues: Arg-63 to Gly-69.
HCRNI50R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6556 as residues: Ser-15 to Ile-24, Asn-56 to Lys-67, Ser-80 to Lys-95.
HCRPJ34R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6557 as residues: Val-5 to Gln-11.
HCQBL95R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6558 as residues: Ser-4 to Pro-10, Glu-18 to Cys-23.
HWLOR95 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6559 as residues: Ser-23 to Ala-28, Pro-64 to Glu-74, Ala-100 to Lys-106.
HKCSI32R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6560 as residues: Ala-4 to Gln-14, Gly-36 to Gln-42, Gly-70 to Leu-77.
HBCJN86R	Preferred epitopes include those comprising a sequence shown in SEQ

	ID NO. 6565 as residues: Pro-6 to Tyr-17, Val-39 to Gln-45.
HWLMZ47 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6567 as residues: Ile-45 to Gly-50.
HCRPD88R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6569 as residues: Asn-15 to Phe-27, His-39 to Ser-44, Glu-49 to Ala-55.
HCQDC47R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6571 as residues: Asp-1 to Asn-7, Pro-22 to Ser-28, Leu-54 to Asn-59, Gly-95 to Arg-101.
H2CBR33R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6573 as residues: Ile-2 to Leu-8.
HWLXV36 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6574 as residues: Lys-14 to Gln-24, Pro-32 to Ile-40.
HWLRE24 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6575 as residues: Lys-20 to Gly-38, Val-42 to Thr-53, Ala-88 to Ala-99.
HWMB A27 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6576 as residues: Gly-35 to Glu-62.
HWMBK08 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6577 as residues: Asp-2 to Cys-8.
HCQCT96R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6582 as residues: Pro-1 to Glu-14.
HWLXR95 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6584 as residues: Lys-22 to Ser-33, Ala-39 to Glu-48, Lys-70 to Lys-75.
HEPAD45R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6586 as residues: Met-42 to Arg-53.
HCRNP41R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6587 as residues: Arg-25 to Asn-34, Lys-54 to Glu-60.
HCYBK83 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6588 as residues: Pro-1 to Ser-6.
HCRND59R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6589 as residues: Phe-88 to Pro-93, Thr-102 to Pro-113.
HCRMA15 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6592 as residues: Gly-4 to Lys-10, Gln-36 to Glu-41.
HCRMJ42R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6593 as residues: Gly-4 to Lys-10, Gln-36 to Glu-41.
HCRM088 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6595 as residues: Gly-4 to Lys-10, Gln-36 to Glu-41, Phe-57 to Asn-62.
HCRNB87R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6596 as residues: Arg-17 to His-22.
HCRNL44R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6598 as residues: Ser-2 to Ala-7.
HCRPK46R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6603 as residues: Tyr-3 to Gly-10, Ala-17 to Tyr-24.
HCRPK48R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6604 as residues: Asn-1 to Arg-9.
HCRQG02R	Preferred epitopes include those comprising a sequence shown in SEQ

	ID NO. 6606 as residues: Tyr-1 to Gly-14.
HCRQM26 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6607 as residues: Tyr-1 to Gly-16.
HHMMA34 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6609 as residues: Gly-4 to Leu-11.
HHMMA44 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6610 as residues: Gly-4 to Lys-10, Gln-36 to Glu-41.
HHMMC42 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6611 as residues: Gly-4 to Lys-10.
HHMMC86 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6612 as residues: Gly-4 to Lys-10, Gln-36 to Pro-43.
HHMME38 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6614 as residues: Gly-4 to Lys-10, Gln-36 to Lys-43.
HHMME80 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6618 as residues: Gly-4 to Lys-10, Gln-36 to Lys-43.
HHMMF79 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6620 as residues: Val-2 to Gly-9.
HOCTA39R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6621 as residues: Lys-7 to Lys-19.
HULCG37R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6623 as residues: Ile-2 to Ser-15, Gln-30 to Asp-38.
HWLMQ27 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6629 as residues: Pro-16 to Tyr-23.
HWLMQ65 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6632 as residues: Gln-37 to Arg-42.
HWLNZ20 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6634 as residues: Pro-12 to Glu-21.
HWLNZ35 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6635 as residues: Pro-16 to Gly-35.
HWLNZ44 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6636 as residues: Pro-13 to Glu-22.
HWLOW58 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6639 as residues: Gly-4 to Lys-10.
HWMB518 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6653 as residues: Pro-10 to Trp-21.
HCRPY45R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6662 as residues: Lys-7 to Lys-20, Gln-46 to Glu-51.
HHMMF44 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6667 as residues: Gly-8 to Leu-15, Gln-40 to Lys-48.
HTWEL13 RA	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6668 as residues: Cys-6 to Ser-12.
HCRMH46 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6674 as residues: Gln-19 to Glu-24.
HWLND45 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6676 as residues: Gly-4 to Lys-11.
HWLWG95 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6677 as residues: Arg-21 to Arg-36.
HCRQO33R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6679 as residues: Pro-6 to Asp-21.

HCRMJ70R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6682 as residues: Leu-18 to Asp-41.
HWLMM72 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6683 as residues: Asp-42 to Asn-47.
HCRMD32 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6684 as residues: Ala-17 to Lys-28, Glu-51 to Gln-56, Ser-64 to Lys-72.
HKAHM80 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6688 as residues: Lys-10 to Ala-17, Glu-27 to Leu-37, Met-74 to Lys-80, Pro-94 to Gln-108.
H2CBM60R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6689 as residues: His-23 to Arg-30, Asp-61 to Asn-73, Phe-89 to Gln-97.
HWLXR73 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6692 as residues: Arg-1 to Pro-11, Gly-16 to Gly-21, Gly-28 to Gly-43.
HWLOI59R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6693 as residues: Val-9 to Leu-20, Lys-44 to Pro-51.
HWLUX53 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6694 as residues: Gly-1 to Glu-10.
HARMO20 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6696 as residues: Arg-2 to Val-18.
HCQDM81 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6699 as residues: Arg-2 to Val-18.
HFJJB15R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6703 as residues: Pro-26 to Gln-32.
HACCH14R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6704 as residues: Thr-1 to Tyr-7.
HCRPV08R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6708 as residues: Val-26 to Val-33, Phe-41 to Ser-55, Val-62 to Gly-72.
HWMBB77 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6709 as residues: Gln-7 to Leu-17, Lys-110 to Cys-116, Asn-133 to Asn-138.
HHEPL48R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6710 as residues: Thr-2 to Met-11, Cys-15 to Pro-20, Asp-28 to Ser-33, Lys-40 to Gly-45.
HCRPT53R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6711 as residues: Tyr-9 to Phe-14, Glu-30 to Lys-39.
HTXJU67R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6714 as residues: Ile-10 to Gln-15, Pro-22 to Asn-28.
HWMCCL33 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6715 as residues: Ala-83 to Ala-88.
HCQCO67R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6717 as residues: Cys-15 to Ser-30, Ser-39 to Met-45.
HWLVI33R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6719 as residues: Arg-32 to Gly-38.
HWMBBA55 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6720 as residues: Thr-1 to Gln-7, Thr-26 to Leu-36, Ala-86 to

	Asp-104, Ser-114 to Val-121.
HCRON89R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6725 as residues: Ala-15 to Gly-22.
HLDDP53R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6727 as residues: Ala-25 to Asp-32.
HWLME23 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6728 as residues: Ala-9 to Arg-15.
HWLVP88 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6729 as residues: Arg-21 to Ser-28, Gly-115 to Gln-142.
HWLMG29 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6739 as residues: Ser-16 to Lys-21, Pro-34 to Lys-41.
HCQCF55R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6740 as residues: Arg-1 to Arg-26, Ser-42 to Tyr-50, Glu-60 to Cys-69.
HWLWB88 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6742 as residues: Pro-6 to Glu-13.
HWLXR58 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6747 as residues: Glu-4 to Asp-12, Glu-19 to Lys-29, Ser-32 to Glu-40, Glu-51 to Thr-56, Ile-58 to Ser-79, Ser-86 to Glu-95.
HCYBO60R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6750 as residues: His-8 to Gly-18, Gly-26 to Pro-35, Pro-58 to Asp-64.
HE2BG62R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6751 as residues: Phe-10 to Tyr-15.
HCRMW12 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6752 as residues: Gly-21 to Asn-31, Cys-62 to Lys-68, Pro-76 to Thr-81, Cys-105 to Arg-124, Lys-139 to Gln-145, Gly-151 to Gly-158.
HWLVF61 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6755 as residues: Tyr-12 to Ile-17, Pro-28 to Asn-33, Arg-45 to Asp-53.
HWMBP47 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6757 as residues: Val-1 to Val-10.
HWLQF89 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6760 as residues: Pro-8 to Pro-25, Asp-72 to Thr-78, Glu-81 to Ser-87.
HWMCC54 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6763 as residues: Gln-66 to Ser-71, Ser-80 to Gly-92.
HCQAS76R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6767 as residues: Thr-34 to Ser-40.
HKLRA71R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6768 as residues: Ile-1 to Ser-9.
HWMCJ58 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6769 as residues: Pro-10 to Arg-18.
HWLMJ20 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6770 as residues: Pro-56 to Trp-61.
HWLMU79 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6773 as residues: Trp-4 to Lys-11.
HWLNN06	Preferred epitopes include those comprising a sequence shown in SEQ

R	ID NO. 6775 as residues: Gln-27 to Ser-32, Trp-57 to Ser-65, Glu-72 to Ser-85, Lys-103 to Ser-117.
HWLMM42 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6776 as residues: Asn-43 to His-64.
HWMB38 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6777 as residues: His-61 to Gly-68.
HWLVU11 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6778 as residues: Val-65 to Thr-74, Ser-84 to Asn-101.
HCQDW90 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6785 as residues: Arg-18 to Ser-24.
HCYBM34 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6786 as residues: Arg-22 to Ser-28.
HCYBM57 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6787 as residues: Arg-31 to Thr-38.
HCQCK49 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6789 as residues: Phe-14 to Ser-22.
HWLRQ41 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6792 as residues: Lys-13 to Asp-24.
HWLOC77 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6793 as residues: Phe-47 to Ser-52.
HDDNQ21 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6794 as residues: Tyr-6 to Gly-13, Asn-35 to Thr-42, Pro-47 to Glu-56.
HCQDA89 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6796 as residues: Leu-7 to Arg-13.
HCQCO43R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6797 as residues: Asp-18 to Arg-29.
HCQCG73R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6798 as residues: Lys-12 to Asn-18, Glu-24 to Glu-31, Ile-40 to Ala-53, Pro-65 to Asp-75.
HWLQA92 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6799 as residues: Arg-10 to Ser-18, Pro-27 to Lys-36.
HCROM41 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6802 as residues: Ser-1 to Arg-9, Thr-40 to Trp-47, Ser-84 to Asp-95, Leu-113 to Asn-127, Pro-140 to Arg-151.
H2LAA02R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6803 as residues: Ala-11 to Pro-20, Asn-39 to Val-46.
HCQDU29 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6805 as residues: Val-1 to Met-8.
HWMBJ73 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6811 as residues: Arg-41 to Glu-46.
HCRNO44R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6814 as residues: Lys-1 to Thr-6.
HSAMD89 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6818 as residues: Leu-32 to Glu-59, Lys-67 to Lys-89.
HCROE42R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6820 as residues: Phe-48 to Gly-56, Ile-60 to Glu-65, Pro-73 to Trp-80, Ser-100 to Lys-117, Lys-126 to Ser-138.
HCROE77R	Preferred epitopes include those comprising a sequence shown in SEQ

	ID NO. 6824 as residues: Asp-46 to Lys-51.
HOCTA19R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6827 as residues: Ser-3 to Ala-12, Gly-71 to Val-84.
HWLOM88 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6829 as residues: Glu-11 to Cys-17, Ala-26 to Trp-31, Ser-43 to Glu-55, Gly-127 to Ala-132.
H2CBI14R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6830 as residues: Lys-21 to Lys-29.
HCRNI08R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6831 as residues: Glu-10 to Val-16, Thr-59 to Ser-66, Asp-112 to Ala-121, Pro-147 to Ala-157.
HFPBS29R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6832 as residues: Pro-22 to His-30.
HCQCB43R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6834 as residues: Asn-4 to Tyr-9.
HCQDB27R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6836 as residues: Asn-4 to Tyr-9.
HCQCR82R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6838 as residues: Glu-9 to Gly-17.
HWLWH33 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6842 as residues: Arg-10 to Arg-15, Val-25 to Gly-33, Pro-45 to Asp-51.
HCYBJ83R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6843 as residues: Arg-1 to Gly-6, Arg-60 to Gly-65.
HWLRE17 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6844 as residues: Gln-34 to Gly-46, Gly-54 to Arg-61, Pro-67 to Gly-82, Glu-91 to Asn-114.
HWLOM10 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6846 as residues: Glu-1 to Arg-11, Thr-18 to Ser-39, Ala-51 to Leu-56, Pro-69 to Gly-78, Glu-88 to Ala-93, Pro-114 to Lys-126, Leu-133 to Thr-141.
H2LBA48R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6848 as residues: Thr-13 to Thr-23.
HCRPZ16R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6849 as residues: Ala-14 to Cys-32, Lys-34 to Arg-40, Ser-46 to Trp-52, Arg-59 to Gly-64.
HKCSA80R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6850 as residues: Asn-39 to Gln-44.
HCRPH64R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6852 as residues: Arg-38 to Ser-46.
HDTBZ03R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6853 as residues: Lys-1 to Gly-28, Thr-50 to Leu-57, Glu-70 to Trp-90, Pro-93 to Asp-100.
HLYED39R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6854 as residues: Arg-2 to Thr-9.
HCQCB85R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6855 as residues: Gly-9 to Ser-14, Gln-26 to Gly-37.
HCRNF48R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6858 as residues: Glu-29 to Leu-34, Thr-40 to Pro-45, Ser-68 to

	Met-73.
HWLQA11 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6860 as residues: His-60 to Cys-69.
HWLXJ34R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6863 as residues: Arg-13 to Leu-22, Ser-25 to Glu-30, Leu-32 to Ala-43, Thr-49 to Pro-55, Ala-69 to Tyr-76, Pro-83 to Ser-91, Glu-104 to Ser-115.
HCRQN67R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6865 as residues: Lys-1 to Ser-12, Arg-20 to Gln-25, Pro-80 to Arg-86.
HCYBH30R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6866 as residues: Thr-19 to Lys-27.
HCROE26R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6869 as residues: Arg-25 to Val-33, Ser-43 to Gly-48, Ala-54 to Gly-59.
HOHBE57R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6870 as residues: Asp-1 to Gln-14, Thr-34 to Pro-40, Asn-42 to Asp-57, Ala-112 to Gly-117.
HWMBB94 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6872 as residues: Ser-53 to Val-62.
HUVHA17 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6873 as residues: Glu-34 to Thr-41.
HLTIJ91R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6874 as residues: Glu-11 to Leu-21, Glu-42 to Gln-50.
HCRMC40 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6875 as residues: Arg-37 to Val-48.
HWLQD31 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6878 as residues: Ala-37 to Lys-42, Pro-55 to Asp-62.
HOSBE19R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6880 as residues: Asp-25 to Ile-31.
HWLQG37 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6882 as residues: Ala-10 to Lys-16, Lys-19 to Val-27.
HSAMB82 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6883 as residues: Gln-1 to Arg-11.
HWLWE05 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6884 as residues: Thr-5 to Thr-14.
HFVKA92R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6893 as residues: Asp-28 to Arg-34.
HKLSA82R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6894 as residues: Phe-1 to Glu-12, Gln-21 to Asp-28, Asp-30 to Pro-35.
HWLNK27 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6896 as residues: Gln-2 to Trp-8.
HCRNT24R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6897 as residues: Arg-13 to Thr-21, Ser-43 to Ala-49.
HCQAW95 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6898 as residues: Thr-2 to Lys-7, Lys-12 to Pro-21.
HFCE553R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6902 as residues: Thr-12 to Leu-18.



HCQCQ84R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6903 as residues: Gly-1 to Ala-10.
HWMBC92 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6905 as residues: Leu-49 to Asn-62, Pro-65 to Leu-84.
HWLQQ35 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6908 as residues: Arg-6 to Ala-19, Asn-26 to Thr-50, Phe-57 to Ser-62, Asp-68 to Glu-96, Ser-102 to Gly-137.
HCRNZ02R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6911 as residues: Asn-1 to Lys-9, Cys-51 to Ala-65, Thr-74 to Arg-86.
HCQDW65 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6916 as residues: Lys-19 to Ser-27.
HCQDN27 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6918 as residues: Glu-6 to Gln-21.
HCQC192R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6919 as residues: Pro-19 to Lys-40.
HCROT79R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6922 as residues: Gly-12 to Glu-18.
H2CAA07R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6923 as residues: Glu-8 to Ala-16, Tyr-25 to Trp-32.
H2LAD20R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6924 as residues: Ser-1 to Leu-6, Ser-22 to Leu-31.
HWLQZ32 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6925 as residues: Pro-1 to Leu-7, Gly-49 to Gly-69, Glu-100 to Ala-106.
HCRQK79 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6929 as residues: Lys-7 to Gly-14, Ala-31 to Gly-37.
HCQAD53 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6930 as residues: Thr-1 to Thr-13.
HKCUD58 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6931 as residues: Ser-21 to Cys-28.
HCRNR93R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6932 as residues: Lys-54 to Leu-64.
HWLQH13 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6933 as residues: Asp-12 to Ser-19, Leu-52 to Gln-57, Leu-79 to Glu-86, Asn-97 to Phe-109, Gln-134 to Asn-142, Arg-151 to Gly-156.
H2CBQ60R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6934 as residues: Ala-23 to Asp-32, Thr-42 to Gly-47, Pro-59 to Glu-67, Phe-77 to Ser-84.
H2LAW43 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6935 as residues: Thr-3 to Ser-12.
HWLVJ22R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6936 as residues: Gln-7 to Ser-23, Pro-63 to Lys-86.
H2CAA28R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6938 as residues: Glu-17 to Cys-22.
H2CAA36R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6939 as residues: Asp-1 to Arg-9.
H2CBG84R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6941 as residues: Gly-13 to Leu-20.

H2CBJ35R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6942 as residues: Val-3 to Ala-11, Ala-38 to Leu-51, Ser-53 to Pro-70, Gln-88 to Gly-94, Ser-106 to Ser-113.
H2CBK71R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6944 as residues: Pro-18 to Pro-24, Arg-31 to Thr-41.
H2CBN87R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6945 as residues: Asp-1 to Ser-6.
H2CBP73R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6946 as residues: Ala-2 to Ser-9, Pro-40 to Gly-54.
H2CBS94R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6947 as residues: Gly-39 to Gln-45.
H2CBV81R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6949 as residues: Arg-1 to Trp-8.
H2CBW73 RB	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6950 as residues: Trp-1 to Ser-8, Pro-17 to Glu-27, Gln-41 to Val-54, Asp-65 to Pro-76.
H2LAZ29R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6953 as residues: Asp-8 to Gly-18, Ala-21 to Arg-26, Glu-31 to Lys-36, Ser-61 to Gly-66.
H2LAZ92R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6954 as residues: His-10 to Phe-16, Thr-64 to Arg-79.
H2LBB20R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6956 as residues: Pro-17 to Arg-29, Gly-49 to Ala-62, Gly-70 to Lys-81.
HBAHC91R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6960 as residues: Gln-21 to Ala-27.
HCEOM04 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6962 as residues: Thr-2 to Lys-11.
HCFOE14R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6963 as residues: Glu-20 to Tyr-25, Phe-43 to Glu-48.
HCHOX67 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6964 as residues: Ser-16 to His-21, Ala-29 to Thr-35.
HCQAB27R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6965 as residues: Lys-1 to Val-13.
HCQAB44R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6968 as residues: Thr-19 to Thr-31.
HCQAB53R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6969 as residues: Ile-34 to His-39.
HCQAC03R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6970 as residues: Ser-51 to Gly-60.
HCQAD62 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6976 as residues: Ala-1 to Val-8, Arg-24 to Gly-36.
HCQAE39R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6981 as residues: Thr-3 to Arg-19.
HCQAG32 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6986 as residues: Arg-1 to Tyr-6.
HCQAI15R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6994 as residues: Gly-1 to Ala-8.
HCQAK16	Preferred epitopes include those comprising a sequence shown in SEQ

R	ID NO. 6998 as residues: Gly-1 to Ser-9.
HCQAK17 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 6999 as residues: Ala-1 to Arg-7.
HCQAL71R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7001 as residues: Val-2 to His-12.
HCQAM57 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7004 as residues: Arg-1 to Thr-8.
HCQAN95 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7012 as residues: Phe-11 to Ser-17, Leu-42 to Gly-47.
HCQAR63R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7016 as residues: Thr-5 to Arg-14.
HCQAS25R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7019 as residues: His-4 to His-10.
HCQAT12R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7025 as residues: Trp-2 to Gly-9.
HCQAV66 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7032 as residues: Gly-1 to Ser-8.
HCQAW40 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7036 as residues: His-1 to Ile-26, Leu-30 to Ser-37, Ala-59 to Leu-66.
HCQBA47R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7038 as residues: Ser-8 to Arg-14.
HCQBE19R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7043 as residues: Glu-25 to Ser-30.
HCQBL61R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7049 as residues: Arg-38 to Asn-43.
HCQBM58 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7052 as residues: Gln-7 to Glu-16.
HCQCC50R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7067 as residues: Arg-1 to Gly-8, Pro-11 to Asn-21, Gln-28 to Lys-36.
HCQCD10R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7072 as residues: Ser-33 to Tyr-42, Val-51 to Ser-56.
HCQCD46R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7073 as residues: Arg-14 to Thr-21.
HCQCE46R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7079 as residues: Ala-2 to Asp-10.
HCQCE83R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7085 as residues: Arg-14 to Thr-20.
HCQCF77R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7092 as residues: Lys-8 to Asn-19.
HCQCH16R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7104 as residues: Leu-31 to Thr-37, Gly-54 to Glu-61.
HCQCH47R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7108 as residues: Pro-13 to Glu-18.
HCQCJ42R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7126 as residues: Glu-1 to Gly-13.
HCQCJ51R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7129 as residues: Pro-8 to Asn-18, Gln-25 to Val-30.

HCQCJ77R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7132 as residues: Asn-1 to Thr-6.
HCQCJ89R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7134 as residues: Phe-16 to Asn-27.
HCQCK81R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7145 as residues: Glu-15 to Glu-20.
HCQCK90R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7146 as residues: Pro-2 to Thr-10.
HCQCL01R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7147 as residues: Ser-10 to Gly-15.
HCQCL05R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7148 as residues: Thr-24 to Thr-33.
HCQCL14R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7151 as residues: Arg-3 to Gly-13.
HCQCL48R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7159 as residues: Ala-1 to Thr-13.
HCQCL51R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7160 as residues: Pro-9 to Asn-19.
HCQCL55R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7162 as residues: Pro-8 to Asn-18.
HCQCL65R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7165 as residues: Lys-1 to Gly-6, Glu-8 to Arg-13.
HCQCL78R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7169 as residues: Lys-15 to Asn-23.
HCQCL79R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7170 as residues: Pro-1 to Pro-8, Pro-17 to Asp-44.
HCQCO30R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7174 as residues: Ala-17 to Asn-28.
HCQCO53R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7175 as residues: Asn-1 to Gly-11; Gly-16 to Arg-22.
HCQCO66R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7177 as residues: Phe-2 to Asn-11.
HCQCO79R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7178 as residues: Arg-1 to Arg-7.
HCQCP19R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7183 as residues: Arg-8 to Met-13, Leu-16 to Leu-24.
HCQCP30R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7186 as residues: Lys-1 to His-7.
HCQCP89R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7193 as residues: Leu-42 to Ser-47.
HCQCR44R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7198 as residues: Lys-34 to Asn-40.
HCQCT38R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7200 as residues: Arg-18 to Arg-26.
HCQCU08R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7204 as residues: Lys-3 to Trp-8.
HCQCU57R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7208 as residues: Lys-1 to Lys-10.
HCQCU67R	Preferred epitopes include those comprising a sequence shown in SEQ

	ID NO. 7210 as residues: Phe-5 to Leu-13.
HCQCV50 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7215 as residues: Thr-8 to Lys-14, Glu-38 to Thr-50, Arg-56 to Asp-62.
HCQCV91 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7218 as residues: Lys-1 to Phe-11.
HCQCX90 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7225 as residues: Leu-5 to Tyr-11.
HCQDA28 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7228 as residues: Glu-48 to Lys-57.
HCQDA36 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7229 as residues: Met-6 to Ser-14, Ser-24 to Lys-29.
HCQDA66 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7232 as residues: Ala-10 to Thr-15, Arg-20 to Glu-34.
HCQDB17R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7234 as residues: Ala-2 to Gly-15, Cys-20 to Asn-29, Gln-35 to Lys-41, Phe-47 to Lys-59.
HCQDB41R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7237 as residues: Gly-1 to Ala-8.
HCQDB49R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7239 as residues: Phe-8 to Gly-13, Pro-16 to Asn-26, Gln-33 to Thr-38.
HCQDB52R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7240 as residues: Leu-13 to Ser-20.
HCQDB54R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7241 as residues: Pro-5 to Trp-17.
HCQDC12R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7245 as residues: Glu-8 to Asn-13, Arg-16 to Ala-28.
HCQDD35 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7255 as residues: Asn-26 to Tyr-32.
HCQDE68R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7269 as residues: Pro-8 to Asn-18, Leu-27 to Cys-33.
HCQDF44R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7271 as residues: Ser-6 to Val-15.
HCQDF69R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7274 as residues: Ser-19 to Arg-25.
HCQDG40 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7278 as residues: Asn-2 to Val-8, Phe-25 to Leu-30.
HCQDG71 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7280 as residues: Lys-8 to Phe-13.
HCQDG80 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7281 as residues: Ser-4 to Tyr-10.
HCQDH18 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7283 as residues: Asn-31 to Ser-37.
HCQDH60 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7288 as residues: Pro-9 to Asn-19, Gln-26 to Ser-34.
HCQDJ22R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7306 as residues: Gly-9 to Asn-14.
HCQDK50	Preferred epitopes include those comprising a sequence shown in SEQ

R	ID NO. 7320 as residues: Lys-38 to Asp-43.
HCQDK58 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7322 as residues: Lys-1 to Trp-6.
HCQDL36R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7327 as residues: Arg-12 to Ser-20.
HCQDL57R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7331 as residues: Ser-25 to Asp-32.
HCQDL96R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7333 as residues: Ser-8 to Ala-18.
HCQDM58 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7338 as residues: Phe-5 to Ala-10.
HCQDN78 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7342 as residues: Asn-1 to Gly-6, Pro-9 to Ser-14.
HCQDP14R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7351 as residues: Gly-1 to Tyr-13.
HCQDQ80 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7359 as residues: Pro-34 to Ser-40.
HCQDS61R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7372 as residues: Ile-17 to Val-24.
HCQDU60 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7387 as residues: Pro-9 to Asn-19.
HCQDU94 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7390 as residues: Pro-7 to His-19.
HCQDV44 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7393 as residues: Thr-19 to Thr-26, Ala-38 to Arg-43.
HCRMB19 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7419 as residues: His-23 to Gln-29.
HCRMB44 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7420 as residues: Ser-1 to Ser-8.
HCRMB82 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7422 as residues: Pro-1 to Ser-9.
HCRMD33 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7429 as residues: Pro-14 to Asn-21, Pro-23 to Asn-34.
HCRMD57 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7430 as residues: Arg-14 to Ser-30.
HCRMD77 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7431 as residues: Asn-4 to Asn-10.
HCRMF07 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7436 as residues: Arg-1 to Gly-10, Glu-16 to Gln-21.
HCRMF33 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7439 as residues: Pro-3 to Thr-8.
HCRMF93 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7447 as residues: Leu-2 to Arg-9, Glu-23 to His-34.
HCRMG20 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7449 as residues: Ser-15 to His-22.
HCRMI33R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7457 as residues: Phe-4 to Ala-10.
HCRMI60R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7460 as residues: Glu-21 to Gly-41, Ala-75 to Gly-80.

HCRMJ54R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7463 as residues: Pro-13 to Phe-23.
HCRMJ81R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7465 as residues: Phe-15 to Phe-24, Asn-63 to Ala-69, Leu-80 to Pro-85.
HCRMP32 RA	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7472 as residues: Arg-5 to Glu-14, Arg-31 to Gly-36.
HCRMS48 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7477 as residues: Arg-42 to Lys-50.
HCRMT03 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7480 as residues: Phe-5 to Ser-13.
HCRMU21 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7483 as residues: Ser-20 to Glu-28.
HCRMW62 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7497 as residues: Cys-53 to Ser-60.
HCRMY29 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7502 as residues: Arg-1 to Thr-6.
HCRMZ36 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7505 as residues: Pro-7 to Ser-27.
HCRMZ71 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7507 as residues: Gly-1 to Cys-7, Thr-33 to Lys-38.
HCRMZ92 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7508 as residues: Gly-45 to Ile-56.
HCRNB85R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7519 as residues: His-1 to Arg-9.
HCRNC23R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7520 as residues: Lys-3 to Arg-11, Pro-19 to Gly-24, Ser-74 to Trp-79.
HCRNE15R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7527 as residues: Arg-7 to Ser-12.
HCRNE60R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7532 as residues: Glu-1 to Ser-11.
HCRNF01R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7533 as residues: Gly-46 to Thr-52.
HCRNH02R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7538 as residues: Asn-46 to Gly-57.
HCRNI71R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7540 as residues: Lys-1 to Trp-10.
HCRNJ25R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7541 as residues: Asp-10 to His-16, Arg-24 to Trp-29, Lys-40 to Phe-46, Leu-83 to Trp-90, Pro-92 to His-97.
HCRNK40 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7543 as residues: Ile-49 to Asn-55, Ser-69 to His-79.
HCRNK94 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7544 as residues: Met-34 to Pro-48.
HCRNL38R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7546 as residues: Ser-11 to Ser-16, Ala-52 to Glu-60.
HCRNL55R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7548 as residues: Thr-7 to Thr-15.

HCRNM50 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7553 as residues: Ser-18 to Asn-26.
HCRNO49R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7559 as residues: Gly-24 to Arg-36, Pro-57 to Arg-65.
HCRNV70 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7571 as residues: Asn-1 to Lys-6, Ser-14 to Gly-26.
HCRNW29 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7573 as residues: Gly-23 to Ser-28.
HCRNX03 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7577 as residues: Arg-1 to Glu-9.
HCRNZ22R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7581 as residues: Leu-24 to Asp-32.
HCROE81R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7592 as residues: Gly-1 to Thr-8.
HCROE89R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7593 as residues: Gly-13 to His-18.
HCROF67R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7595 as residues: Lys-1 to Asn-19, Thr-61 to Ala-68.
HCROG58R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7599 as residues: Pro-44 to Gly-49.
HCROG62R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7600 as residues: Ser-19 to Pro-26.
HCROH29R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7602 as residues: Thr-34 to Ser-40, Arg-102 to Trp-109.
HCROJ88R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7613 as residues: Arg-26 to Gly-33, Arg-39 to Arg-60.
HCROK42 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7619 as residues: Arg-20 to Met-28.
HCROK47 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7620 as residues: Arg-8 to Pro-13.
HCROM53 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7631 as residues: Val-11 to Gln-17, Pro-41 to Thr-47, Arg-66 to Glu-75.
HCROM56 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7632 as residues: Arg-12 to Asn-17, Cys-26 to Gln-36.
HCRON01R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7636 as residues: Asp-4 to Thr-10.
HCRON04R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7637 as residues: Thr-1 to Pro-9.
HCRON70R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7641 as residues: Gly-1 to Arg-12.
HCROO46R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7643 as residues: Gln-47 to Ser-58.
HCROQ92R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7653 as residues: Ser-16 to Ser-28.
HCRROR76R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7656 as residues: Ser-6 to Gly-11.
HCROS08R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7658 as residues: Asn-23 to Asn-29.



HCRET15R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7662 as residues: Pro-26 to Lys-39, Asn-42 to Asn-49.
HCRET84R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7666 as residues: Pro-22 to Gly-28, Gly-37 to Lys-44.
HCROW69R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7674 as residues: Arg-1 to Gly-8, Leu-19 to Pro-25.
HCROX18R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7676 as residues: Gly-1 to Arg-9.
HCROX38R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7678 as residues: Gly-3 to Val-9.
HCROZ45R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7683 as residues: Thr-1 to Gln-9, Thr-19 to Ser-31, Pro-36 to Glu-42, Leu-53 to Ala-63, Asn-92 to Gly-98, Leu-124 to Leu-131.
HCRPA19R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7689 as residues: Phe-62 to His-68.
HCRPA91R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7692 as residues: Gln-15 to Asn-26.
HCRPC30R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7695 as residues: Val-1 to Gly-6.
HCRPC56R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7698 as residues: Arg-1 to Glu-11, Val-27 to Val-35.
HCRPC58R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7699 as residues: Ala-4 to Thr-9.
HCRPE32R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7705 as residues: Asp-1 to Asp-18, Ser-41 to Arg-52.
HCRPE74R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7706 as residues: Met-6 to Gln-17.
HCRPF62R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7708 as residues: Cys-16 to Lys-33.
HCRPG28R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7715 as residues: Pro-26 to Ser-32.
HCRPG37R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7716 as residues: Arg-3 to Arg-9.
HCRPH31R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7719 as residues: Pro-35 to Gly-40.
HCRPH50R A	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7720 as residues: Pro-2 to His-8.
HCRPI158R A	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7721 as residues: Arg-14 to Val-19.
HCRPJ68R A	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7727 as residues: Trp-29 to Asn-42.
HCRPL63R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7733 as residues: Ser-10 to Leu-21, Phe-31 to Lys-36, Ala-54 to Leu-67.
HCRPL79R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7734 as residues: Arg-1 to Leu-6.
HCRPM51 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7737 as residues: Gly-14 to Thr-19, Gly-42 to Trp-48, Asp-63 to Ala-71.

HCRPN29R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7740 as residues: Lys-7 to Cys-12.
HCRPN49R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7742 as residues: Ser-6 to Thr-11, Pro-14 to His-28, Pro-34 to Asp-42, Pro-51 to Thr-60.
HCRPN73R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7743 as residues: Asn-16 to Ala-21.
HCRPO31R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7746 as residues: Gly-25 to Arg-30.
HCRPQ72R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7754 as residues: Pro-12 to Ser-17, Trp-30 to Ala-35, Gln-49 to Gln-55.
HCRPR62R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7757 as residues: Cys-14 to His-20.
HCRPR70R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7758 as residues: Arg-16 to His-24.
HCRPR91R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7759 as residues: Tyr-1 to Ile-6, Gln-16 to Asp-24.
HCRPT82R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7767 as residues: Lys-1 to Lys-7.
HCRPU09R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7769 as residues: Phe-20 to Thr-25.
HCRPV91R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7775 as residues: Glu-19 to Ala-31, Glu-52 to Thr-82, Leu-104 to Gln-110, Arg-125 to Arg-130.
HCRPX71R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7779 as residues: Pro-5 to Ala-11.
HCRPY01R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7780 as residues: Glu-1 to Gly-10, Ala-23 to Phe-33, Gln-59 to Ser-64.
HCRPY91R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7782 as residues: His-9 to Thr-17, Thr-25 to His-31.
HCRQB75R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7785 as residues: Arg-11 to Gly-23.
HCRQC36R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7786 as residues: Arg-53 to Arg-60.
HCRQD29R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7788 as residues: Pro-7 to Ala-15, Ser-32 to Lys-40.
HCRQD47R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7790 as residues: Ser-57 to Arg-64, Glu-71 to Gly-84, Arg-95 to Trp-100.
HCRQJ26R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7804 as residues: Asn-1 to Gly-9.
HCRQL13R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7808 as residues: Glu-22 to Gly-27.
HCRQL65R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7809 as residues: Arg-6 to Thr-11.
HCRQM37R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7810 as residues: Ala-42 to Pro-47, Pro-59 to Ser-66, Leu-79 to

	Arg-84, Gly-114 to Thr-119, Pro-132 to Gly-139.
HCRQM58 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7812 as residues: Glu-1 to Thr-7, Leu-12 to Asn-18.
HCRQM59 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7813 as residues: Glu-6 to Gly-13, Pro-64 to Ala-70.
HCYBA36R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7818 as residues: Tyr-40 to Ser-48.
HCYBD19R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7820 as residues: Ala-18 to Glu-26, Lys-39 to Glu-44, Phe-50 to Ser-55.
HCYBE34R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7822 as residues: Glu-27 to Pro-34, Ser-49 to Gln-54, Ser-56 to Thr-62, Asp-102 to Lys-107, Gly-113 to Glu-119.
HCYBH89R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7826 as residues: Pro-33 to Pro-47.
HCYBH93R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7827 as residues: Ser-11 to Thr-19, Arg-59 to Asp-65.
HDPPE11R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7830 as residues: Pro-1 to Ala-14, Pro-44 to Gly-51.
HDTDS96R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7835 as residues: Ser-17 to Pro-22.
HE8AE77R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7840 as residues: Ile-3 to Asn-9.
HEONL43R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7842 as residues: Arg-1 to Val-10.
HFKA60R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7845 as residues: Pro-13 to Arg-18, Phe-27 to Glu-37, Ala-45 to Leu-53, Gln-61 to Glu-69, Ser-75 to Ser-82, Gln-84 to Gly-94, Ala-96 to Pro-112.
HFRBW76 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7847 as residues: Thr-2 to Gly-13.
HGBBA17R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7849 as residues: Asp-16 to Asn-22.
HHEQA63R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7853 as residues: Thr-13 to Ser-19, Ile-52 to Thr-59.
HHEWA82 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7854 as residues: Cys-10 to Glu-15.
HHMMA39 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7856 as residues: Arg-15 to Pro-21.
HHMMB13 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7861 as residues: Glu-35 to Val-42.
HHMME20 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7870 as residues: Thr-11 to Ala-17.
HJMBH59R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7881 as residues: Ser-8 to Phe-24.
HKCSB18R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7885 as residues: Arg-12 to Lys-19.
HKCSF11R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7889 as residues: Pro-18 to Ser-26.

HKCSJ63R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7892 as residues: Pro-6 to Gly-12.
HKCTB80R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7898 as residues: Ser-7 to Val-13, Arg-54 to Pro-62.
HKCTD27R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7900 as residues: Thr-9 to Gly-16.
HKLRA55R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7904 as residues: Arg-41 to Arg-47.
HKLSB04R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7912 as residues: Ser-27 to Leu-36, Glu-45 to Gly-52.
HKLSB05R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7913 as residues: Asn-1 to Phe-7, Val-15 to Met-20.
HKLSB41R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7914 as residues: Phe-13 to Ala-27, Gly-70 to Glu-77.
HKLSB76R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7915 as residues: Phe-1 to Gln-10.
HKLSC29R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7917 as residues: Ala-4 to Ser-12.
HKLSD79R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7922 as residues: Ser-8 to Gly-15.
HKLSD93R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7923 as residues: Gly-11 to Gly-17.
HNBTH48R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7928 as residues: Thr-7 to Ser-13.
HNTCO26R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7931 as residues: Arg-1 to Lys-10, Asn-18 to Thr-28.
HOCTA23R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7933 as residues: Phe-17 to Gly-22, Thr-40 to Val-47, Pro-58 to Gly-72, Pro-92 to Trp-109.
HOCTB19R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7936 as residues: Gln-13 to Ser-34.
HOCTB32R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7937 as residues: Arg-1 to Lys-8, Phe-30 to Lys-35.
HOCTC38R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7941 as residues: Ser-6 to Ser-14, Val-16 to Gln-23, Gly-39 to Ser-45, Thr-52 to Ser-58.
HOCTD35R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7946 as residues: Cys-2 to Val-7.
HOCTE12R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7950 as residues: Asn-1 to Val-6, Pro-22 to Phe-29.
HOCTF43R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7953 as residues: Asp-22 to Gly-27, Arg-35 to Pro-43, Asp-63 to Ser-68.
HOHAS78R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7959 as residues: Ala-1 to Cys-20, Arg-29 to Ser-37, Leu-48 to Phe-54.
HOSNW54R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7961 as residues: Pro-1 to Asp-8, Asn-28 to Ser-33.
HPCRD42R	Preferred epitopes include those comprising a sequence shown in SEQ

	ID NO. 7963 as residues: Arg-1 to Glu-6, Arg-52 to Arg-57.
HPFCN76R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7965 as residues: Ser-1 to Cys-16, Pro-30 to Asp-40.
HPJBZ88R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7966 as residues: Pro-17 to Gly-27, Gly-30 to His-36, Phe-44 to Gly-54, Pro-56 to Ala-61.
HSIFC66R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7968 as residues: Glu-8 to Asn-13, Arg-16 to Thr-29.
HSOBF88R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7969 as residues: Asp-1 to Tyr-8.
HSODE15R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7970 as residues: Leu-8 to Ser-15, Gly-21 to Ser-27.
HTXRF56R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7974 as residues: Glu-1 to Arg-6, Ala-14 to Gly-27, Arg-31 to His-37.
HTYND19 RA	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7975 as residues: Glu-1 to Thr-15, Val-21 to Leu-27, Ser-37 to Arg-58, Met-82 to Asn-91.
HWLMA60 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7981 as residues: Leu-10 to Arg-16.
HWLMB42 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7984 as residues: Arg-24 to Arg-41.
HWLMC65 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7985 as residues: Phe-18 to Trp-23.
HWLMC79 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7986 as residues: Thr-30 to Thr-39.
HWLME59 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7989 as residues: Asp-26 to Cys-32.
HWLME69 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7990 as residues: Arg-11 to Gly-17.
HWLME71 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7991 as residues: Gln-1 to Gly-6.
HWLMG12 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7994 as residues: Asn-1 to Gly-10.
HWLMG15 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 7995 as residues: Pro-10 to Thr-16, Arg-39 to Gly-44.
HWLMG57 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8000 as residues: Ser-7 to Gly-17, Asn-35 to His-46.
HWLMG84 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8002 as residues: Ser-3 to Ala-23, Pro-25 to Gly-31, Ala-59 to Gly-80, Pro-83 to His-91, Gly-99 to Gly-110, Pro-112 to Trp-123.
HWLMH50 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8006 as residues: Ile-2 to Gln-7, Glu-21 to Gly-27.
HWLMJ80 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8010 as residues: Leu-65 to Thr-80.
HWLMK20 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8011 as residues: Ser-8 to Pro-19.
HWLMK25 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8012 as residues: Lys-1 to Ser-6.

HWLMK31 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8013 as residues: Arg-1 to Trp-10, Arg-15 to Gly-24.
HWLMK62 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8014 as residues: Gly-1 to Ala-10, Pro-42 to Pro-53.
HWLMM68 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8015 as residues: His-10 to Asn-16.
HWLMQ01 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8023 as residues: Asn-3 to Lys-12.
HWLMR23 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8025 as residues: Gly-9 to Lys-17.
HWLMR69 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8026 as residues: Asp-6 to Glu-13, Leu-63 to Gln-70.
HWLMS31 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8027 as residues: Pro-2 to Leu-7.
HWLMT64 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8030 as residues: Asp-1 to Gln-6.
HWLMU26 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8033 as residues: Pro-21 to Val-26, Val-28 to Val-37, Ser-44 to Tyr-49, Phe-53 to Leu-65.
HWLMV60 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8036 as residues: Ser-27 to Glu-39, Leu-43 to Gln-48.
HWLNH76 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8050 as residues: Cys-8 to His-24, Ser-36 to Arg-44.
HWLNL41 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8055 as residues: Pro-1 to Glu-22, Ala-31 to Asp-39, Glu-65 to Pro-72.
HWLNP65 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8061 as residues: Val-12 to Trp-17, Ile-22 to Ser-28.
HWLNR26 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8063 as residues: Glu-10 to Gly-28.
HWLNY40 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8080 as residues: Pro-1 to Arg-18.
HWLOA09 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8083 as residues: Tyr-13 to Phe-18, Gln-22 to Tyr-27, Pro-74 to Met-81.
HWLOC65 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8087 as residues: Arg-41 to Asn-50.
HWLOF46 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8090 as residues: Arg-11 to Val-19, Thr-28 to Ala-39.
HWLOI17R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8097 as residues: His-21 to Gly-29.
HWLOJ19R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8102 as residues: Ser-20 to Leu-37.
HWLOK12 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8105 as residues: Arg-24 to Asn-29.
HWLOK45 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8107 as residues: His-20 to Pro-26.
HWLON66 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8112 as residues: Phe-1 to Gln-11.

HWLON71 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8113 as residues: Ala-1 to Tyr-8.
HWLOQ52 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8115 as residues: Cys-2 to Asn-8.
HWLOR15 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8117 as residues: Asp-1 to Gly-10, Thr-53 to Asp-59.
HWLOR65 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8118 as residues: Gly-16 to Gln-26, Gly-31 to Lys-37.
HWLOX29 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8132 as residues: Ser-16 to Ser-22.
HWLOY73 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8135 as residues: Pro-1 to Val-11, Pro-13 to Gln-20, Pro-39 to Pro-46, Gln-51 to Ala-73.
HWLOZ87 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8137 as residues: Gln-20 to Ser-27, Gln-42 to Ser-48.
HWLQA28 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8140 as residues: Lys-40 to Asn-55.
HWLQD30 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8147 as residues: Pro-6 to Pro-13, Gly-19 to Lys-39.
HWLQD40 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8148 as residues: Pro-14 to Asn-19, Glu-51 to Asn-57, Ser-67 to Pro-75.
HWLQD46 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8151 as residues: Gly-28 to Leu-33.
HWLQD89 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8152 as residues: Lys-2 to Lys-7.
HWLQH32 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8164 as residues: Asn-19 to Thr-27.
HWLQH58 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8165 as residues: Pro-45 to Asp-52.
HWLQM69 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8169 as residues: Glu-6 to Pro-12.
HWLQP18 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8175 as residues: Ser-2 to Ala-11.
HWLQQ83 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8177 as residues: Ser-26 to Gly-37, Pro-44 to Ser-50.
HWLQR90 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8178 as residues: Gln-1 to Trp-9, Val-17 to Glu-22.
HWLQT52 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8182 as residues: Gly-1 to Ser-10, Arg-16 to Met-22, Ser-24 to Trp-29, Gly-37 to Arg-44, Gly-52 to Ser-59, Arg-67 to Ser-85, Thr-107 to Gly-114.
HWLQU50 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8185 as residues: Tyr-26 to Cys-34, Thr-45 to Asn-50.
HWLRB15 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8191 as residues: Leu-8 to His-14, Ser-17 to Trp-31, Thr-44 to Gln-50, Ala-53 to Ala-61, Thr-72 to Ala-90, Val-116 to Leu-123.
HWLRE01 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8194 as residues: Ser-9 to Asn-19, Asn-34 to Cys-41.

HWLRO35 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8206 as residues: Ile-20 to Thr-29, Lys-39 to Ala-46.
HWLRV63 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8218 as residues: Glu-15 to Cys-26, Arg-34 to Ile-58.
HWLUG53 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8222 as residues: Asn-17 to Lys-27.
HWLUH72 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8225 as residues: Asp-58 to Cys-72, Gln-81 to Glu-89.
HWLUJ19R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8231 as residues: Ser-49 to Ser-55.
HWLUL47 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8236 as residues: Lys-18 to Lys-24.
HWLUL65 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8237 as residues: Asp-1 to His-8.
HWLUQ87 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8254 as residues: Cys-34 to Arg-41.
HWLUR41 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8256 as residues: Ser-24 to Trp-30.
HWLUU88 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8261 as residues: Pro-9 to Gly-20.
HWLUV67 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8264 as residues: Pro-5 to Arg-13.
HWLUZ07 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8269 as residues: Glu-1 to Gly-8.
HWLVD26 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8275 as residues: Arg-11 to Asp-16.
HWLVD74 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8278 as residues: His-1 to Thr-10.
HWLVE21 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8279 as residues: Leu-33 to Glu-40, Lys-52 to Lys-62.
HWLVF34 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8282 as residues: Arg-54 to His-62.
HWLVJ15R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8289 as residues: Phe-38 to Phe-44.
HWLVJ84R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8290 as residues: Asn-2 to Gly-33, Ser-35 to Phe-63.
HWLVK62 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8292 as residues: Ser-1 to Glu-13.
HWLVL10 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8295 as residues: Arg-1 to Thr-8.
HWLVM05 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8298 as residues: Ala-8 to Asn-15.
HWLVN12 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8301 as residues: Gln-1 to Tyr-6.
HWLVV06 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8310 as residues: Arg-1 to Arg-14.
HWLVW89 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8317 as residues: Asn-6 to Gly-11.
HWLVY14	Preferred epitopes include those comprising a sequence shown in SEQ



R	ID NO. 8320 as residues: Ser-1 to Trp-7.
HWLWA14 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8324 as residues: Thr-1 to Trp-9.
HWLWA82 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8325 as residues: Val-1 to Ser-8, Arg-52 to Gly-58.
HWLWB71 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8331 as residues: Cys-28 to Trp-42.
HWLWB77 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8333 as residues: Cys-40 to Trp-47.
HWLWD32 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8334 as residues: Gly-13 to Ala-21.
HWLWD60 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8336 as residues: Tyr-16 to Phe-22.
HWLWE80 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8339 as residues: Gly-1 to Trp-6.
HWLWJ36 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8346 as residues: Asp-11 to Asn-25.
HWLWO57 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8353 as residues: Ser-1 to Phe-6.
HWLWP08 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8357 as residues: Arg-4 to Val-12.
HWLWS28 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8369 as residues: Arg-4 to Tyr-9.
HWLWU27 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8373 as residues: Ala-16 to Phe-21.
HWLWW4 6R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8374 as residues: Ser-6 to Ser-16.
HWLXA13 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8380 as residues: Asp-8 to Ser-17.
HWLXA23 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8381 as residues: Pro-10 to Ile-20.
HWLXJ59R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8388 as residues: Pro-7 to Ser-13.
HWLXN33 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8391 as residues: Glu-1 to Gly-7.
HWLXP33 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8395 as residues: Thr-3 to Lys-13.
HWLXP45 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8396 as residues: Gly-10 to Gly-22, Pro-27 to Arg-35.
HWLXR49 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8403 as residues: Gly-10 to Pro-15.
HWLXT31 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8405 as residues: Gly-10 to Glu-15, Ser-31 to Lys-36.
HWMB46 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8410 as residues: Phe-11 to Lys-17.
HWMBD22 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8411 as residues: Pro-11 to Ala-18.
HWMBD71 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8413 as residues: Asp-4 to Leu-9.

HWMBE36 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8415 as residues: Tyr-12 to Met-18.
HWMBF87 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8416 as residues: Gly-1 to Arg-6.
HWMBG63 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8417 as residues: Glu-1 to Ser-9.
HWMBI08 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8420 as residues: Arg-29 to His-37, Trp-43 to Arg-48.
HWMBK47 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8423 as residues: Asn-6 to His-11, Asn-25 to Cys-30.
HWMBL29 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8425 as residues: Leu-11 to Phe-16.
HWMBL57 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8426 as residues: Glu-46 to Tyr-57.
HWMBL82 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8427 as residues: Leu-27 to Thr-67, His-74 to Asn-79, Ser-83 to Lys-94, Gln-109 to Lys-115, Asp-122 to Tyr-131, Leu-138 to Arg-145, Glu-149 to Lys-154.
HWMBM67 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8430 as residues: Gly-32 to Arg-37, Ala-41 to Asp-47.
HWMBM83 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8431 as residues: Thr-21 to Asn-31.
HWMBN52 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8435 as residues: Thr-21 to Glu-34, Leu-50 to Cys-56.
HWMBP01 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8437 as residues: Ser-9 to Ile-17.
HWMBR40 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8443 as residues: Pro-8 to Glu-19.
HWMBR68 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8446 as residues: Tyr-1 to Trp-6.
HWMBR77 RA	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8448 as residues: Lys-1 to Val-8.
HWMBT23 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8454 as residues: Val-3 to Arg-14.
HWMBV48 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8458 as residues: Pro-51 to Ser-57, Gln-65 to Leu-76.
HWMBW5 4R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8460 as residues: Pro-55 to Glu-63.
HWMBY90 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8466 as residues: Thr-1 to Arg-6.
HWMCB93 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8473 as residues: His-1 to Ala-13.
HWMCE24 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8480 as residues: Asn-6 to Lys-12.
HWMCF45 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8482 as residues: Pro-10 to Phe-16.
HWMCH47 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8484 as residues: Pro-16 to Ser-24.
HWMCH76	Preferred epitopes include those comprising a sequence shown in SEQ

R	ID NO. 8485 as residues: Thr-5 to Val-10.
HWMCI32 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8498 as residues: Lys-5 to Glu-12.
HWMCL55 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8521 as residues: Pro-3 to Asn-8.
HWMCM32 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8528 as residues: Ser-9 to Thr-16.
HWMCM80 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8534 as residues: Pro-2 to Ala-8.
H2CBK69R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8540 as residues: Thr-1 to Ile-6, Gly-35 to Ser-42, Ile-68 to Arg-76.
H2CBD14R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8541 as residues: Asp-57 to Leu-62.
HDTEO77R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8547 as residues: Glu-9 to Gly-17.
HCRNC15R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8548 as residues: Asp-26 to Gln-33, Leu-61 to Cys-66, Thr-143 to Asp-155.
HWLRD05 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8549 as residues: Glu-108 to Asp-119.
HPWBS43R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8550 as residues: Thr-8 to Ala-14.
H2CBU94R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8551 as residues: Gln-7 to Lys-15, Cys-23 to Tyr-31, His-40 to Glu-47, Arg-66 to Cys-79, Lys-91 to Arg-98.
HWMCC56 R	Preferred epitopes include those comprising a sequence shown in SEQ ID NO. 8554 as residues: Pro-30 to Ser-35, Arg-37 to Cys-42, Pro-47 to Gly-53, Arg-61 to Gln-66.

The present application is also directed to proteins containing polypeptides at least 80%, 85%, 90%, 95%, 96%, 97%, 98%, 99% or 100% identical to the polypeptide sequence set forth. In preferred embodiments, the application is directed to proteins containing polypeptides at least 80%, 85%, 90%, 95%, 96%, 97%, 98%, 99% or 100% identical to polypeptides having the amino acid sequence of the specific N- and C-terminal deletions. Polynucleotides encoding these polypeptides are also encompassed by the invention.

Preferably, the polynucleotide fragments of the invention encode a polypeptide which demonstrates a functional activity. By a polypeptide demonstrating a "functional activity" is meant, a polypeptide capable of displaying one or more known functional activities associated with a full-length (complete) protein. Such functional activities include, but are not limited to, biological activity, antigenicity [ability to bind (or compete with a polypeptide for binding) to an anti-polypeptide antibody], immunogenicity (ability to generate antibody which binds to a cancer specific polypeptide), ability to form multimers with polypeptides of the invention, and ability to bind to a receptor or ligand for a polypeptide.

The functional activity of the colon and/or colon cancer related polypeptides, and fragments, variants derivatives, and analogs thereof, can be assayed by various methods.

For example, in one embodiment where one is assaying for the ability to bind or compete with full-length polypeptide of the present invention for binding to anti-polypeptide antibody, various immunoassays known in the art can be used, including but not limited to, competitive and non-competitive assay systems using techniques such as radioimmunoassays, ELISA (enzyme linked immunosorbent assay), "sandwich" immunoassays, immunoradiometric assays, gel diffusion precipitation reactions, immunodiffusion assays, in situ immunoassays (using colloidal gold, enzyme or radioisotope labels, for example), western blots, precipitation reactions, agglutination assays (e.g., gel agglutination assays, hemagglutination assays), complement fixation assays, immunofluorescence assays, protein A assays, and immunoelectrophoresis assays, etc. In one embodiment, antibody binding is detected by detecting a label on the primary antibody. In another embodiment, the primary antibody is detected by detecting binding of a secondary antibody or reagent to the primary antibody. In a further embodiment, the secondary antibody is labeled. Many means are known in the art for detecting binding in an immunoassay and are within the scope of the present invention.

In another embodiment, where a ligand is identified, or the ability of a polypeptide fragment, variant or derivative of the invention to multimerize is being evaluated, binding can be assayed, e.g., by means well-known in the art, such as, for example, reducing and non-reducing gel chromatography, protein affinity chromatography, and affinity blotting. See generally, Phizicky, E., et al., 1995, Microbiol. Rev. 59:94-123. In another embodiment, physiological correlates polypeptide of the present invention binding to its substrates (signal transduction) can be assayed.

In addition, assays described herein (see Examples) and otherwise known in the art may routinely be applied to measure the ability of polypeptides of the present invention and fragments, variants derivatives and analogs thereof to elicit polypeptide related biological activity (either in vitro or in vivo). Other methods will be known to the skilled artisan and are within the scope of the invention.

Among the especially preferred fragments of the invention are fragments characterized by structural or functional attributes of polypeptides of the present invention. Such fragments include amino acid residues that comprise alpha-helix and alpha-helix forming regions ("alpha-regions"), beta-sheet and beta-sheet-forming regions ("beta-regions"), turn and turn-forming regions ("turn-regions"), coil and coil-forming regions ("coil-regions"), hydrophilic regions, hydrophobic regions, alpha amphipathic regions, beta amphipathic regions, surface forming regions, and high antigenic index regions (i.e., containing four or more contiguous amino acids having an antigenic index of greater than or equal to 1.5, as identified using the default parameters of the Jameson-Wolf program) of complete (i.e., full-length) SEQ ID NO:Y. Certain preferred regions include, but are not limited to, regions of the aforementioned types identified by analysis of the amino acid sequence; such preferred regions include; Garnier-Robson predicted alpha-regions, beta-regions, turn-regions, and coil-regions; Chou-Fasman predicted alpha-regions, beta-regions, turn-regions, and coil-regions; Kyte-Doolittle predicted hydrophilic and hydrophobic regions; Eisenberg alpha and beta amphipathic regions; Emini surface-forming regions; and Jameson-Wolf high antigenic index regions, as predicted using the default parameters of these predictive algorithms. Polynucleotides encoding these polypeptides are also encompassed by the invention.

In additional embodiments, the polynucleotides of the invention encode functional attributes of the polypeptides of the present invention. Preferred embodiments of the

invention in this regard include fragments that comprise alpha-helix and alpha-helix forming regions ("alpha-regions"), beta-sheet and beta-sheet forming regions ("beta-regions"), turn and turn-forming regions ("turn-regions"), coil and coil-forming regions ("coil-regions"), hydrophilic regions, hydrophobic regions, alpha amphipathic regions, beta amphipathic regions, flexible regions, surface-forming regions and high antigenic index regions of polypeptides of the present invention. Polypeptide fragments of SEQ ID NO:Y falling within conserved domains are specifically contemplated by the present invention. Moreover, polynucleotide fragments encoding these domains are also contemplated.

Other preferred polypeptide fragments are biologically active fragments. Biologically active fragments are those exhibiting activity similar, but not necessarily identical, to an activity of the polypeptide of the present invention. The biological activity of the fragments may include an improved desired activity, or a decreased undesirable activity.

### **Epitopes & Antibodies**

The present invention encompasses colon and/or colon cancer related polypeptides comprising, or alternatively consisting of, an epitope of the polypeptide having an amino acid sequence of SEQ ID NO:Y, or an epitope of the polypeptide sequence encoded by a polynucleotide sequence contained in a clone deposited with the ATCC or encoded by a polynucleotide that hybridizes to the complement of the sequence of SEQ ID NO:Y or contained in a deposited clone under stringent hybridization conditions or lower stringency hybridization conditions as defined supra.

The present invention further encompasses polynucleotide sequences encoding an epitope of a polypeptide sequence of the invention (such as, for example, the sequence disclosed in SEQ ID NO:X) polynucleotide sequences of the complementary strand of a polynucleotide sequence encoding an epitope of the invention, and polynucleotide sequences which hybridize to the complementary strand under stringent hybridization conditions or lower stringency hybridization conditions defined supra.

The term "epitopes," as used herein, refers to portions of a polypeptide having antigenic or immunogenic activity in an animal, preferably a mammal, and most preferably in a human. In a preferred embodiment, the present invention encompasses a polypeptide comprising an epitope, as well as the polynucleotide encoding this polypeptide. An "immunogenic epitope," as used herein, is defined as a portion of a protein that elicits an

antibody response in an animal, as determined by any method known in the art, for example, by the methods for generating antibodies described infra. (See, for example, Geysen et al., Proc. Natl. Acad. Sci. USA 81:3998-4002 (1983)). The term "antigenic epitope," as used herein, is defined as a portion of a protein to which an antibody can immunospecifically bind its antigen as determined by any method well known in the art, for example, by the immunoassays described herein. Immunospecific binding excludes non-specific binding but does not necessarily exclude cross-reactivity with other antigens. Antigenic epitopes need not necessarily be immunogenic.

Fragments which function as epitopes may be produced by any conventional means. (See, e.g., Houghten, Proc. Natl. Acad. Sci. USA 82:5131-5135 (1985), further described in U.S. Patent No. 4,631,211).

In the present invention, antigenic epitopes preferably contain a sequence of at least 4, at least 5, at least 6, at least 7, more preferably at least 8, at least 9, at least 10, at least 11, at least 12, at least 13, at least 14, at least 15, at least 20, at least 25, at least 30, at least 40, at least 50, and, most preferably, between about 15 to about 30 amino acids. Preferred polypeptides comprising immunogenic or antigenic epitopes are at least 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, or 100 amino acid residues in length. Additional non-exclusive preferred antigenic epitopes include the antigenic epitopes disclosed herein, as well as portions thereof. Antigenic epitopes are useful, for example, to raise antibodies, including monoclonal antibodies, that specifically bind the epitope. Preferred antigenic epitopes include the antigenic epitopes disclosed herein, as well as any combination of two, three, four, five or more of these antigenic epitopes. Antigenic epitopes can be used as the target molecules in immunoassays. (See, for instance, Wilson et al., Cell 37:767-778 (1984); Sutcliffe et al., Science 219:660-666 (1983)).

Non-limiting examples of antigenic polypeptides or peptides that can be used to generate colon cancer antigen-specific antibodies include a polypeptide comprising the portion(s) of SEQ ID NO:Y specified in Table 8. These polypeptide fragments have been determined to bear antigenic epitopes of the colon and/or colon cancer related proteins of the invention by the analysis of the Jameson-Wolf antigenic index which is included in the DNASTar suite of computer programs. Thus, an antigenic portion of a colon and/or colon cancer related polypeptide of the invention may comprise the portion of SEQ ID NO:Y shown in Table 8 or may comprise the portion shown in Table 8. By "comprise" it is

intended that an antigenic polypeptide may contain the portion of the polypeptide shown in Table 8 but it may contain additional flanking residues on either the amino or carboxyl termini of the recited portion. Such additional flanking sequences are preferably sequences naturally found adjacent to the portion; i.e., contiguous sequence shown in SEQ ID NO:Y.

5 Said flanking sequence may, however, be sequences from a heterologous polypeptide, such as from another colon and/or colon cancer related protein described herein or from a heterologous polypeptide not described herein.

Similarly, immunogenic epitopes can be used, for example, to induce antibodies according to methods well known in the art. (See, for instance, Sutcliffe et al., supra; Wilson et al., supra; Chow et al., Proc. Natl. Acad. Sci. USA 82:910-914; and Bittle et al., J. Gen. Virol. 66:2347-2354 (1985). Preferred immunogenic epitopes include the immunogenic epitopes disclosed herein, as well as any combination of two, three, four, five or more of these immunogenic epitopes. The polypeptides comprising one or more immunogenic epitopes may be presented for eliciting an antibody response together with a carrier protein, 15 such as an albumin, to an animal system (such as rabbit or mouse), or, if the polypeptide is of sufficient length (at least about 25 amino acids), the polypeptide may be presented without a carrier. However, immunogenic epitopes comprising as few as 8 to 10 amino acids have been shown to be sufficient to raise antibodies capable of binding to, at the very least, linear epitopes in a denatured polypeptide (e.g., in Western blotting).

20 Epitope-bearing polypeptides of the present invention may be used to induce antibodies according to methods well known in the art including, but not limited to, in vivo immunization, in vitro immunization, and phage display methods. See, e.g., Sutcliffe et al., supra; Wilson et al., supra, and Bittle et al., J. Gen. Virol., 66:2347-2354 (1985). If in vivo immunization is used, animals may be immunized with free peptide; however, anti-peptide 25 antibody titer may be boosted by coupling the peptide to a macromolecular carrier, such as keyhole limpet hemacyanin (KLH) or tetanus toxoid. For instance, peptides containing cysteine residues may be coupled to a carrier using a linker such as maleimidobenzoyl- N-hydroxysuccinimide ester (MBS), while other peptides may be coupled to carriers using a more general linking agent such as glutaraldehyde. Animals such as rabbits, rats and mice 30 are immunized with either free or carrier- coupled peptides, for instance, by intraperitoneal and/or intradermal injection of emulsions containing about 100 µg of peptide or carrier protein and Freund's adjuvant or any other adjuvant known for stimulating an immune



response. Several booster injections may be needed, for instance, at intervals of about two weeks, to provide a useful titer of anti-peptide antibody which can be detected, for example, by ELISA assay using free peptide adsorbed to a solid surface. The titer of anti-peptide antibodies in serum from an immunized animal may be increased by selection of anti-peptide  
5 antibodies, for instance, by adsorption to the peptide on a solid support and elution of the selected antibodies according to methods well known in the art.

As one of skill in the art will appreciate, and as discussed above, the polypeptides of the present invention comprising an immunogenic or antigenic epitope can be fused to other polypeptide sequences. For example, the polypeptides of the present invention may be fused  
10 with the constant domain of immunoglobulins (IgA, IgE, IgG, IgM), or portions thereof (CH1, CH2, CH3, or any combination thereof and portions thereof), or albumin (including but not limited to recombinant albumin (see, e.g., U.S. Patent No. 5,876,969, issued March 2, 1999, EP Patent 0 413 622, and U.S. Patent No. 5,766,883, issued June 16, 1998, herein incorporated by reference in their entirety)), resulting in chimeric polypeptides. Such fusion  
15 proteins may facilitate purification and may increase half-life in vivo. This has been shown for chimeric proteins consisting of the first two domains of the human CD4-polypeptide and various domains of the constant regions of the heavy or light chains of mammalian immunoglobulins. See, e.g., EP 394,827; Traunecker et al., Nature, 331:84-86 (1988). Enhanced delivery of an antigen across the epithelial barrier to the immune system has been  
20 demonstrated for antigens (e.g., insulin) conjugated to an FcRn binding partner such as IgG or Fc fragments (see, e.g., PCT Publications WO 96/22024 and WO 99/04813). IgG Fusion proteins that have a disulfide-linked dimeric structure due to the IgG portion disulfide bonds have also been found to be more efficient in binding and neutralizing other molecules than monomeric polypeptides or fragments thereof alone. See, e.g., Fountoulakis et al., J.  
25 Biochem., 270:3958-3964 (1995). Nucleic acids encoding the above epitopes can also be recombined with a gene of interest as an epitope tag (e.g., the hemagglutinin ("HA") tag or flag tag) to aid in detection and purification of the expressed polypeptide. For example, a system described by Janknecht et al. allows for the ready purification of non-denatured fusion proteins expressed in human cell lines (Janknecht et al., 1991, Proc. Natl. Acad. Sci.  
30 USA 88:8972- 897). In this system, the gene of interest is subcloned into a vaccinia recombination plasmid such that the open reading frame of the gene is translationally fused to an amino-terminal tag consisting of six histidine residues. The tag serves as a matrix

binding domain for the fusion protein. Extracts from cells infected with the recombinant vaccinia virus are loaded onto Ni<sup>2+</sup> nitriloacetic acid-agarose column and histidine-tagged proteins can be selectively eluted with imidazole-containing buffers.

Additional fusion proteins of the invention may be generated through the techniques of gene-shuffling, motif-shuffling, exon-shuffling, and/or codon-shuffling (collectively referred to as "DNA shuffling"). DNA shuffling may be employed to modulate the activities of polypeptides corresponding to SEQ ID NO:Y, such methods can be used to generate polypeptides with altered activity, as well as agonists and antagonists of the polypeptides. See, generally, U.S. Patent Nos. 5,605,793; 5,811,238; 5,830,721; 5,834,252; and 5,837,458, and Patten et al., Curr. Opin. Biotechnol. 8:724-33 (1997); Harayama, Trends Biotechnol. 16(2):76-82 (1998); Hansson, et al., J. Mol. Biol. 287:265-76 (1999); and Lorenzo and Blasco, Biotechniques 24(2):308- 13 (1998) (each of these patents and publications are hereby incorporated by reference in its entirety).

In one embodiment, alteration of polynucleotides corresponding to SEQ ID NO:X and the polypeptides encoded by these polynucleotides may be achieved by DNA shuffling. DNA shuffling involves the assembly of two or more DNA segments by homologous or site-specific recombination to generate variation in the polynucleotide sequence. In another embodiment, polynucleotides of the invention, or the encoded polypeptides, may be altered by being subjected to random mutagenesis by error-prone PCR, random nucleotide insertion or other methods prior to recombination. In another embodiment, one or more components, motifs, sections, parts, domains, fragments, etc., of a polynucleotide encoding a polypeptide of the invention may be recombined with one or more components, motifs, sections, parts, domains, fragments, etc. of one or more heterologous molecules.

## **Antibodies**

Further polypeptides of the invention relate to antibodies and T-cell antigen receptors (TCR) which immunospecifically bind a polypeptide, polypeptide fragment, or variant of SEQ ID NO:Y, and/or an epitope, of the present invention (as determined by immunoassays well known in the art for assaying specific antibody-antigen binding). Antibodies of the invention include, but are not limited to, polyclonal, monoclonal, multispecific, human, humanized or chimeric antibodies, single chain antibodies, Fab fragments, F(ab') fragments, fragments produced by a Fab expression library, anti-idiotypic (anti-Id) antibodies

(including, e.g., anti-Id antibodies to antibodies of the invention), and epitope-binding fragments of any of the above. The term "antibody," as used herein, refers to immunoglobulin molecules and immunologically active portions of immunoglobulin molecules, i.e., molecules that contain an antigen binding site that immunospecifically binds an antigen. The immunoglobulin molecules of the invention can be of any type (e.g., IgG, IgE, IgM, IgD, IgA and IgY); class (e.g., IgG1, IgG2, IgG3, IgG4, IgA1 and IgA2) or subclass of immunoglobulin molecule. In preferred embodiments, the immunoglobulin molecules of the invention are IgG1. In other preferred embodiments, the immunoglobulin molecules of the invention are IgG4.

Most preferably the antibodies are human antigen-binding antibody fragments of the present invention and include, but are not limited to, Fab, Fab' and F(ab')<sub>2</sub>, Fd, single-chain Fvs (scFv), single-chain antibodies, disulfide-linked Fvs (sdFv) and fragments comprising either a VL or VH domain. Antigen-binding antibody fragments, including single-chain antibodies, may comprise the variable region(s) alone or in combination with the entirety or a portion of the following: hinge region, CH1, CH2, and CH3 domains. Also included in the invention are antigen-binding fragments also comprising any combination of variable region(s) with a hinge region, CH1, CH2, and CH3 domains. The antibodies of the invention may be from any animal origin including birds and mammals. Preferably, the antibodies are human, murine (e.g., mouse and rat), donkey, sheep, rabbit, goat, guinea pig, camel, horse, or chicken. As used herein, "human" antibodies include antibodies having the amino acid sequence of a human immunoglobulin and include antibodies isolated from human immunoglobulin libraries or from animals transgenic for one or more human immunoglobulin and that do not express endogenous immunoglobulins, as described infra and, for example in, U.S. Patent No. 5,939,598 by Kucherlapati et al.

The antibodies of the present invention may be monospecific, bispecific, trispecific or of greater multispecificity. Multispecific antibodies may be specific for different epitopes of a polypeptide of the present invention or may be specific for both a polypeptide of the present invention as well as for a heterologous epitope, such as a heterologous polypeptide or solid support material. See, e.g., PCT publications WO 93/17715; WO 92/08802; WO 91/00360; WO 92/05793; Tutt, et al., J. Immunol. 147:60-69 (1991); U.S. Patent Nos. 4,474,893; 4,714,681; 4,925,648; 5,573,920; 5,601,819; Kostelny et al., J. Immunol. 148:1547-1553 (1992).

Antibodies of the present invention may be described or specified in terms of the epitope(s) or portion(s) of a polypeptide of the present invention which they recognize or specifically bind. The epitope(s) or polypeptide portion(s) may be specified as described herein, e.g., by N-terminal and C-terminal positions, by size in contiguous amino acid residues, or listed in the Tables and Figures. Preferred epitopes of the invention include those shown in Table 8, as well as polynucleotides that encode these epitopes. Antibodies which specifically bind any epitope or polypeptide of the present invention may also be excluded. Therefore, the present invention includes antibodies that specifically bind polypeptides of the present invention, and allows for the exclusion of the same.

Antibodies of the present invention may also be described or specified in terms of their cross-reactivity. Antibodies that do not bind any other analog, ortholog, or homolog of a polypeptide of the present invention are included. Antibodies that bind polypeptides with at least 95%, at least 90%, at least 85%, at least 80%, at least 75%, at least 70%, at least 65%, at least 60%, at least 55%, and at least 50% identity (as calculated using methods known in the art and described herein) to a polypeptide of the present invention are also included in the present invention. In specific embodiments, antibodies of the present invention cross-react with murine, rat and/or rabbit homologs of human proteins and the corresponding epitopes thereof. Antibodies that do not bind polypeptides with less than 95%, less than 90%, less than 85%, less than 80%, less than 75%, less than 70%, less than 65%, less than 60%, less than 55%, and less than 50% identity (as calculated using methods known in the art and described herein) to a polypeptide of the present invention are also included in the present invention. In a specific embodiment, the above-described cross-reactivity is with respect to any single specific antigenic or immunogenic polypeptide, or combination(s) of 2, 3, 4, 5, or more of the specific antigenic and/or immunogenic polypeptides disclosed herein. Further included in the present invention are antibodies which bind polypeptides encoded by polynucleotides which hybridize to a polynucleotide of the present invention under stringent hybridization conditions (as described herein). Antibodies of the present invention may also be described or specified in terms of their binding affinity to a polypeptide of the invention. Preferred binding affinities include those with a dissociation constant or  $K_d$  less than  $5 \times 10^{-2}$  M,  $10^{-2}$  M,  $5 \times 10^{-3}$  M,  $10^{-3}$  M,  $5 \times 10^{-4}$  M,  $10^{-4}$  M,  $5 \times 10^{-5}$  M,  $10^{-5}$  M,  $5 \times 10^{-6}$  M,  $10^{-6}$  M,  $5 \times 10^{-7}$  M,  $10^{-7}$  M,  $5 \times 10^{-8}$  M,  $10^{-8}$  M,  $5 \times 10^{-9}$  M,  $10^{-9}$  M,  $5 \times 10^{-10}$  M,  $10^{-10}$  M,  $5 \times 10^{-11}$  M,  $10^{-11}$  M,  $5 \times 10^{-12}$  M,  $10^{-12}$  M,  $5 \times 10^{-13}$  M,  $10^{-13}$  M,  $5 \times 10^{-14}$  M,  $10^{-14}$  M,  $5 \times 10^{-15}$  M, or  $10^{-15}$  M.

The invention also provides antibodies that competitively inhibit binding of an antibody to an epitope of the invention as determined by any method known in the art for determining competitive binding, for example, the immunoassays described herein. In preferred embodiments, the antibody competitively inhibits binding to the epitope by at least 95%, at least 90%, at least 85 %, at least 80%, at least 75%, at least 70%, at least 60%, or at least 50%.

Antibodies of the present invention may act as agonists or antagonists of the polypeptides of the present invention. For example, the present invention includes antibodies which disrupt the receptor/ligand interactions with the polypeptides of the invention either partially or fully. Preferably, antibodies of the present invention bind an antigenic epitope disclosed herein, or a portion thereof. The invention features both receptor-specific antibodies and ligand-specific antibodies. The invention also features receptor-specific antibodies which do not prevent ligand binding but prevent receptor activation. Receptor activation (i.e., signaling) may be determined by techniques described herein or otherwise known in the art. For example, receptor activation can be determined by detecting the phosphorylation (e.g., tyrosine or serine/threonine) of the receptor or its substrate by immunoprecipitation followed by western blot analysis (for example, as described supra). In specific embodiments, antibodies are provided that inhibit ligand activity or receptor activity by at least 95%, at least 90%, at least 85%, at least 80%, at least 75%, at least 70%, at least 60%, or at least 50% of the activity in absence of the antibody.

The invention also features receptor-specific antibodies which both prevent ligand binding and receptor activation as well as antibodies that recognize the receptor-ligand complex, and, preferably, do not specifically recognize the unbound receptor or the unbound ligand. Likewise, included in the invention are neutralizing antibodies which bind the ligand and prevent binding of the ligand to the receptor, as well as antibodies which bind the ligand, thereby preventing receptor activation, but do not prevent the ligand from binding the receptor. Further included in the invention are antibodies which activate the receptor. These antibodies may act as receptor agonists, i.e., potentiate or activate either all or a subset of the biological activities of the ligand-mediated receptor activation, for example, by inducing dimerization of the receptor. The antibodies may be specified as agonists, antagonists or inverse agonists for biological activities comprising the specific biological activities of the peptides of the invention disclosed herein. The above antibody agonists can be made using

methods known in the art. See, e.g., PCT publication WO 96/40281; U.S. Patent No. 5,811,097; Deng et al., Blood 92(6):1981-1988 (1998); Chen et al., Cancer Res. 58(16):3668-3678 (1998); Harrop et al., J. Immunol. 161(4):1786-1794 (1998); Zhu et al., Cancer Res. 58(15):3209-3214 (1998); Yoon et al., J. Immunol. 160(7):3170-3179 (1998);  
5 Prat et al., J. Cell. Sci. 111(Pt2):237-247 (1998); Pitard et al., J. Immunol. Methods 205(2):177-190 (1997); Liautard et al., Cytokine 9(4):233-241 (1997); Carlson et al., J. Biol. Chem. 272(17):11295-11301 (1997); Taryman et al., Neuron 14(4):755-762 (1995); Muller et al., Structure 6(9):1153-1167 (1998); Bartunek et al., Cytokine 8(1):14-20 (1996) (which are all incorporated by reference herein in their entireties).

10       Antibodies of the present invention may be used, for example, but not limited to, to purify, detect, and target the polypeptides of the present invention, including both in vitro and in vivo diagnostic and therapeutic methods. For example, the antibodies have use in immunoassays for qualitatively and quantitatively measuring levels of the polypeptides of the present invention in biological samples. See, e.g., Harlow et al., Antibodies: A Laboratory  
15 Manual, (Cold Spring Harbor Laboratory Press, 2nd ed. 1988) (incorporated by reference herein in its entirety).

As discussed in more detail below, the antibodies of the present invention may be used either alone or in combination with other compositions. The antibodies may further be recombinantly fused to a heterologous polypeptide at the N- or C-terminus or chemically  
20 conjugated (including covalently and non-covalently conjugations) to polypeptides or other compositions. For example, antibodies of the present invention may be recombinantly fused or conjugated to molecules useful as labels in detection assays and effector molecules such as heterologous polypeptides, drugs, radionuclides, or toxins. See, e.g., PCT publications WO 92/08495; WO 91/14438; WO 89/12624; U.S. Patent No. 5,314,995; and EP 396,387.

25       The antibodies of the invention include derivatives that are modified, i.e., by the covalent attachment of any type of molecule to the antibody such that covalent attachment does not prevent the antibody from generating an anti-idiotypic response. For example, but not by way of limitation, the antibody derivatives include antibodies that have been modified, e.g., by glycosylation, acetylation, pegylation, phosphorylation, amidation, derivatization by  
30 known protecting/blocking groups, proteolytic cleavage, linkage to a cellular ligand or other protein, etc. Any of numerous chemical modifications may be carried out by known techniques, including, but not limited to specific chemical cleavage, acetylation, formylation,

metabolic synthesis of tunicamycin, etc. Additionally, the derivative may contain one or more non-classical amino acids.

The antibodies of the present invention may be generated by any suitable method known in the art. Polyclonal antibodies to an antigen-of- interest can be produced by various procedures well known in the art. For example, a polypeptide of the invention can be administered to various host animals including, but not limited to, rabbits, mice, rats, etc. to induce the production of sera containing polyclonal antibodies specific for the antigen. Various adjuvants may be used to increase the immunological response, depending on the host species, and include but are not limited to, Freund's (complete and incomplete), mineral gels such as aluminum hydroxide, surface active substances such as lysolecithin, pluronic polyols, polyanions, peptides, oil emulsions, keyhole limpet hemocyanins, dinitrophenol, and potentially useful human adjuvants such as BCG (bacille Calmette-Guerin) and corynebacterium parvum. Such adjuvants are also well known in the art.

Monoclonal antibodies can be prepared using a wide variety of techniques known in the art including the use of hybridoma, recombinant, and phage display technologies, or a combination thereof. For example, monoclonal antibodies can be produced using hybridoma techniques including those known in the art and taught, for example, in Harlow et al., Antibodies: A Laboratory Manual, (Cold Spring Harbor Laboratory Press, 2nd ed. 1988); Hammerling, et al., in: Monoclonal Antibodies and T-Cell Hybridomas 563-681 (Elsevier, N.Y., 1981) (said references incorporated by reference in their entireties). The term "monoclonal antibody" as used herein is not limited to antibodies produced through hybridoma technology. The term "monoclonal antibody" refers to an antibody that is derived from a single clone, including any eukaryotic, prokaryotic, or phage clone, and not the method by which it is produced.

Methods for producing and screening for specific antibodies using hybridoma technology are routine and well known in the art and are discussed in detail in the Examples. In a non-limiting example, mice can be immunized with a polypeptide of the invention or a cell expressing such peptide. Once an immune response is detected, e.g., antibodies specific for the antigen are detected in the mouse serum, the mouse spleen is harvested and splenocytes isolated. The splenocytes are then fused by well known techniques to any suitable myeloma cells; for example cells from cell line SP20 available from the ATCC. Hybridomas are selected and cloned by limited dilution. The hybridoma clones are then

assayed by methods known in the art for cells that secrete antibodies capable of binding a polypeptide of the invention. Ascites fluid, which generally contains high levels of antibodies, can be generated by immunizing mice with positive hybridoma clones.

Accordingly, the present invention provides methods of generating monoclonal  
5 antibodies as well as antibodies produced by the method comprising culturing a hybridoma cell secreting an antibody of the invention wherein, preferably, the hybridoma is generated by fusing splenocytes isolated from a mouse immunized with an antigen of the invention with myeloma cells and then screening the hybridomas resulting from the fusion for hybridoma clones that secrete an antibody able to bind a polypeptide of the invention.

10 Antibody fragments which recognize specific epitopes may be generated by known techniques. For example, Fab and F(ab')<sub>2</sub> fragments of the invention may be produced by proteolytic cleavage of immunoglobulin molecules, using enzymes such as papain (to produce Fab fragments) or pepsin (to produce F(ab')<sub>2</sub> fragments). F(ab')<sub>2</sub> fragments contain the variable region, the light chain constant region and the CH1 domain of the heavy chain.

15 For example, the antibodies of the present invention can also be generated using various phage display methods known in the art. In phage display methods, functional antibody domains are displayed on the surface of phage particles which carry the polynucleotide sequences encoding them. In a particular embodiment, such phage can be utilized to display antigen binding domains expressed from a repertoire or combinatorial  
20 antibody library (e.g., human or murine). Phage expressing an antigen binding domain that binds the antigen of interest can be selected or identified with antigen, e.g., using labeled antigen or antigen bound or captured to a solid surface or bead. Phage used in these methods are typically filamentous phage including fd and M13 binding domains expressed from phage with Fab, Fv or disulfide stabilized Fv antibody domains recombinantly fused to either the  
25 phage gene III or gene VIII protein. Examples of phage display methods that can be used to make the antibodies of the present invention include those disclosed in Brinkman et al., J. Immunol. Methods 182:41-50 (1995); Ames et al., J. Immunol. Methods 184:177-186 (1995); Kettleborough et al., Eur. J. Immunol. 24:952-958 (1994); Persic et al., Gene 187 9-18 (1997); Burton et al., Advances in Immunology 57:191-280 (1994); PCT application No.  
30 PCT/GB91/01134; PCT publications WO 90/02809; WO 91/10737; WO 92/01047; WO 92/18619; WO 93/11236; WO 95/15982; WO 95/20401; and U.S. Patent Nos. 5,698,426; 5,223,409; 5,403,484; 5,580,717; 5,427,908; 5,750,753; 5,821,047; 5,571,698; 5,427,908;



5,516,637; 5,780,225; 5,658,727; 5,733,743 and 5,969,108; each of which is incorporated herein by reference in its entirety.

As described in the above references, after phage selection, the antibody coding regions from the phage can be isolated and used to generate whole antibodies, including human antibodies, or any other desired antigen binding fragment, and expressed in any desired host, including mammalian cells, insect cells, plant cells, yeast, and bacteria, e.g., as described in detail below. For example, techniques to recombinantly produce Fab, Fab' and F(ab')<sub>2</sub> fragments can also be employed using methods known in the art such as those disclosed in PCT publication WO 92/22324; Mullinax et al., *BioTechniques* 12(6):864-869 (1992); and Sawai et al., *AJRI* 34:26-34 (1995); and Better et al., *Science* 240:1041-1043 (1988) (said references incorporated by reference in their entireties).

Examples of techniques which can be used to produce single-chain Fvs and antibodies include those described in U.S. Patents 4,946,778 and 5,258,498; Huston et al., *Methods in Enzymology* 203:46-88 (1991); Shu et al., *PNAS* 90:7995-7999 (1993); and Skerra et al., *Science* 240:1038-1040 (1988). For some uses, including in vivo use of antibodies in humans and in vitro detection assays, it may be preferable to use chimeric, humanized, or human antibodies. A chimeric antibody is a molecule in which different portions of the antibody are derived from different animal species, such as antibodies having a variable region derived from a murine monoclonal antibody and a human immunoglobulin constant region. Methods for producing chimeric antibodies are known in the art. See e.g., Morrison, *Science* 229:1202 (1985); Oi et al., *BioTechniques* 4:214 (1986); Gillies et al., (1989) *J. Immunol. Methods* 125:191-202; U.S. Patent Nos. 5,807,715; 4,816,567; and 4,816,397, which are incorporated herein by reference in their entirety. Humanized antibodies are antibody molecules from non-human species antibody that binds the desired antigen having one or more complementarity determining regions (CDRs) from the non-human species and a framework regions from a human immunoglobulin molecule. Often, framework residues in the human framework regions will be substituted with the corresponding residue from the CDR donor antibody to alter, preferably improve, antigen binding. These framework substitutions are identified by methods well known in the art, e.g., by modeling of the interactions of the CDR and framework residues to identify framework residues important for antigen binding and sequence comparison to identify unusual framework residues at particular positions. (See, e.g., Queen et al., U.S. Patent No. 5,585,089; Riechmann et al.,

Nature 332:323 (1988), which are incorporated herein by reference in their entireties.) Antibodies can be humanized using a variety of techniques known in the art including, for example, CDR-grafting (EP 239,400; PCT publication WO 91/09967; U.S. Patent Nos. 5,225,539; 5,530,101; and 5,585,089), veneering or resurfacing (EP 592,106; EP 519,596; Padlan, Molecular Immunology 28(4/5):489-498 (1991); Studnicka et al., Protein Engineering 7(6):805-814 (1994); Roguska. et al., PNAS 91:969-973 (1994)), and chain shuffling (U.S. Patent No. 5,565,332).

Completely human antibodies are particularly desirable for therapeutic treatment of human patients. Human antibodies can be made by a variety of methods known in the art including phage display methods described above using antibody libraries derived from human immunoglobulin sequences. See also, U.S. Patent Nos. 4,444,887 and 4,716,111; and PCT publications WO 98/46645, WO 98/50433, WO 98/24893, WO 98/16654, WO 96/34096, WO 96/33735, and WO 91/10741; each of which is incorporated herein by reference in its entirety.

Human antibodies can also be produced using transgenic mice which are incapable of expressing functional endogenous immunoglobulins, but which can express human immunoglobulin genes. For example, the human heavy and light chain immunoglobulin gene complexes may be introduced randomly or by homologous recombination into mouse embryonic stem cells. Alternatively, the human variable region, constant region, and diversity region may be introduced into mouse embryonic stem cells in addition to the human heavy and light chain genes. The mouse heavy and light chain immunoglobulin genes may be rendered non-functional separately or simultaneously with the introduction of human immunoglobulin loci by homologous recombination. In particular, homozygous deletion of the JH region prevents endogenous antibody production. The modified embryonic stem cells are expanded and microinjected into blastocysts to produce chimeric mice. The chimeric mice are then bred to produce homozygous offspring which express human antibodies. The transgenic mice are immunized in the normal fashion with a selected antigen, e.g., all or a portion of a polypeptide of the invention. Monoclonal antibodies directed against the antigen can be obtained from the immunized, transgenic mice using conventional hybridoma technology. The human immunoglobulin transgenes harbored by the transgenic mice rearrange during B cell differentiation, and subsequently undergo class switching and somatic mutation. Thus, using such a technique, it is possible to produce therapeutically

useful IgG, IgA, IgM and IgE antibodies. For an overview of this technology for producing human antibodies, see Lonberg and Huszar, Int. Rev. Immunol. 13:65-93 (1995). For a detailed discussion of this technology for producing human antibodies and human monoclonal antibodies and protocols for producing such antibodies, see, e.g., PCT publications WO 98/24893; WO 92/01047; WO 96/34096; WO 96/33735; European Patent No. 0 598 877; U.S. Patent Nos. 5,413,923; 5,625,126; 5,633,425; 5,569,825; 5,661,016; 5,545,806; 5,814,318; 5,885,793; 5,916,771; and 5,939,598, which are incorporated by reference herein in their entirety. In addition, companies such as Abgenix, Inc. (Freemont, CA) and Genpharm (San Jose, CA) can be engaged to provide human antibodies directed against a selected antigen using technology similar to that described above.

Completely human antibodies which recognize a selected epitope can be generated using a technique referred to as "guided selection." In this approach a selected non-human monoclonal antibody, e.g., a mouse antibody, is used to guide the selection of a completely human antibody recognizing the same epitope (Jespers et al., Bio/technology 12:899-903 (1988)).

Further, antibodies to the polypeptides of the invention can, in turn, be utilized to generate anti-idiotypic antibodies that "mimic" polypeptides of the invention using techniques well known to those skilled in the art. (See, e.g., Greenspan & Bona, FASEB J. 7(5):437-444; (1989) and Nissinoff, J. Immunol. 147(8):2429-2438 (1991)). For example, antibodies which bind to and competitively inhibit polypeptide multimerization and/or binding of a polypeptide of the invention to a ligand can be used to generate anti-idiotypes that "mimic" the polypeptide multimerization and/or binding domain and, as a consequence, bind to and neutralize polypeptide and/or its ligand. Such neutralizing anti-idiotypes or Fab fragments of such anti-idiotypes can be used in therapeutic regimens to neutralize polypeptide ligand. For example, such anti-idiotypic antibodies can be used to bind a polypeptide of the invention and/or to bind its ligands/receptors, and thereby block its biological activity.

#### ***Polynucleotides Encoding Antibodies***

The invention further provides polynucleotides comprising a nucleotide sequence encoding an antibody of the invention and fragments thereof. The invention also encompasses polynucleotides that hybridize under stringent or lower stringency hybridization conditions, e.g., as defined supra, to polynucleotides that encode an antibody, preferably, that

specifically binds to a polypeptide of the invention, preferably, an antibody that binds to a polypeptide having the amino acid sequence of SEQ ID NO:Y.

The polynucleotides may be obtained, and the nucleotide sequence of the polynucleotides determined, by any method known in the art. For example, if the nucleotide  
5 sequence of the antibody is known, a polynucleotide encoding the antibody may be assembled from chemically synthesized oligonucleotides (e.g., as described in Kutmeier et al., *BioTechniques* 17:242 (1994)), which, briefly, involves the synthesis of overlapping oligonucleotides containing portions of the sequence encoding the antibody, annealing and ligating of those oligonucleotides, and then amplification of the ligated oligonucleotides by  
10 PCR.

Alternatively, a polynucleotide encoding an antibody may be generated from nucleic acid from a suitable source. If a clone containing a nucleic acid encoding a particular antibody is not available, but the sequence of the antibody molecule is known, a nucleic acid encoding the immunoglobulin may be chemically synthesized or obtained from a suitable  
15 source (e.g., an antibody cDNA library, or a cDNA library generated from, or nucleic acid, preferably poly A+ RNA, isolated from, any tissue or cells expressing the antibody, such as hybridoma cells selected to express an antibody of the invention) by PCR amplification using synthetic primers hybridizable to the 3' and 5' ends of the sequence or by cloning using an oligonucleotide probe specific for the particular gene sequence to identify, e.g., a cDNA  
20 clone from a cDNA library that encodes the antibody. Amplified nucleic acids generated by PCR may then be cloned into replicable cloning vectors using any method well known in the art.

Once the nucleotide sequence and corresponding amino acid sequence of the antibody is determined, the nucleotide sequence of the antibody may be manipulated using methods  
25 well known in the art for the manipulation of nucleotide sequences, e.g., recombinant DNA techniques, site directed mutagenesis, PCR, etc. (see, for example, the techniques described in Sambrook et al., 1990, *Molecular Cloning, A Laboratory Manual*, 2d Ed., Cold Spring Harbor Laboratory, Cold Spring Harbor, NY and Ausubel et al., eds., 1998, *Current Protocols in Molecular Biology*, John Wiley & Sons, NY, which are both incorporated by reference  
30 herein in their entireties ), to generate antibodies having a different amino acid sequence, for example to create amino acid substitutions, deletions, and/or insertions.

In a specific embodiment, the amino acid sequence of the heavy and/or light chain variable domains may be inspected to identify the sequences of the complementarity determining regions (CDRs) by methods that are well known in the art, e.g., by comparison to known amino acid sequences of other heavy and light chain variable regions to determine the regions of sequence hypervariability. Using routine recombinant DNA techniques, one or more of the CDRs may be inserted within framework regions, e.g., into human framework regions to humanize a non-human antibody, as described supra. The framework regions may be naturally occurring or consensus framework regions, and preferably human framework regions (see, e.g., Chothia et al., *J. Mol. Biol.* 278:457-479 (1998) for a listing of human framework regions). Preferably, the polynucleotide generated by the combination of the framework regions and CDRs encodes an antibody that specifically binds a polypeptide of the invention. Preferably, as discussed supra, one or more amino acid substitutions may be made within the framework regions, and, preferably, the amino acid substitutions improve binding of the antibody to its antigen. Additionally, such methods may be used to make amino acid substitutions or deletions of one or more variable region cysteine residues participating in an intrachain disulfide bond to generate antibody molecules lacking one or more intrachain disulfide bonds. Other alterations to the polynucleotide are encompassed by the present invention and within the skill of the art.

In addition, techniques developed for the production of "chimeric antibodies" (Morrison et al., *Proc. Natl. Acad. Sci.* 81:851-855 (1984); Neuberger et al., *Nature* 312:604-608 (1984); Takeda et al., *Nature* 314:452-454 (1985)) by splicing genes from a mouse antibody molecule of appropriate antigen specificity together with genes from a human antibody molecule of appropriate biological activity can be used. As described supra, a chimeric antibody is a molecule in which different portions are derived from different animal species, such as those having a variable region derived from a murine mAb and a human immunoglobulin constant region, e.g., humanized antibodies.

Alternatively, techniques described for the production of single chain antibodies (U.S. Patent No. 4,946,778; Bird, *Science* 242:423-42 (1988); Huston et al., *Proc. Natl. Acad. Sci. USA* 85:5879-5883 (1988); and Ward et al., *Nature* 334:544-54 (1989)) can be adapted to produce single chain antibodies. Single chain antibodies are formed by linking the heavy and light chain fragments of the Fv region via an amino acid bridge, resulting in a single

chain polypeptide. Techniques for the assembly of functional Fv fragments in *E. coli* may also be used (Skerra et al., Science 242:1038- 1041 (1988)).

### ***Methods of Producing Antibodies***

5           The antibodies of the invention can be produced by any method known in the art for the synthesis of antibodies, in particular, by chemical synthesis or preferably, by recombinant expression techniques.

Recombinant expression of an antibody of the invention, or fragment, derivative or analog thereof, (e.g., a heavy or light chain of an antibody of the invention or a single chain  
10 antibody of the invention), requires construction of an expression vector containing a polynucleotide that encodes the antibody. Once a polynucleotide encoding an antibody molecule or a heavy or light chain of an antibody, or portion thereof (preferably containing the heavy or light chain variable domain), of the invention has been obtained, the vector for the production of the antibody molecule may be produced by recombinant DNA technology  
15 using techniques well known in the art. Thus, methods for preparing a protein by expressing a polynucleotide containing an antibody encoding nucleotide sequence are described herein. Methods which are well known to those skilled in the art can be used to construct expression vectors containing antibody coding sequences and appropriate transcriptional and translational control signals. These methods include, for example, in vitro recombinant DNA  
20 techniques, synthetic techniques, and in vivo genetic recombination. The invention, thus, provides replicable vectors comprising a nucleotide sequence encoding an antibody molecule of the invention, or a heavy or light chain thereof, or a heavy or light chain variable domain, operably linked to a promoter. Such vectors may include the nucleotide sequence encoding the constant region of the antibody molecule (see, e.g., PCT Publication WO 86/05807; PCT  
25 Publication WO 89/01036; and U.S. Patent No. 5,122,464) and the variable domain of the antibody may be cloned into such a vector for expression of the entire heavy or light chain.

The expression vector is transferred to a host cell by conventional techniques and the transfected cells are then cultured by conventional techniques to produce an antibody of the invention. Thus, the invention includes host cells containing a polynucleotide encoding an  
30 antibody of the invention, or a heavy or light chain thereof, or a single chain antibody of the invention, operably linked to a heterologous promoter. In preferred embodiments for the expression of double-chained antibodies, vectors encoding both the heavy and light chains

may be co-expressed in the host cell for expression of the entire immunoglobulin molecule, as detailed below.

A variety of host-expression vector systems may be utilized to express the antibody molecules of the invention. Such host-expression systems represent vehicles by which the coding sequences of interest may be produced and subsequently purified, but also represent cells which may, when transformed or transfected with the appropriate nucleotide coding sequences, express an antibody molecule of the invention in situ. These include but are not limited to microorganisms such as bacteria (e.g., *E. coli*, *B. subtilis*) transformed with recombinant bacteriophage DNA, plasmid DNA or cosmid DNA expression vectors containing antibody coding sequences; yeast (e.g., *Saccharomyces*, *Pichia*) transformed with recombinant yeast expression vectors containing antibody coding sequences; insect cell systems infected with recombinant virus expression vectors (e.g., baculovirus) containing antibody coding sequences; plant cell systems infected with recombinant virus expression vectors (e.g., cauliflower mosaic virus, CaMV; tobacco mosaic virus, TMV) or transformed with recombinant plasmid expression vectors (e.g., Ti plasmid) containing antibody coding sequences; or mammalian cell systems (e.g., COS, CHO, BHK, 293, 3T3 cells) harboring recombinant expression constructs containing promoters derived from the genome of mammalian cells (e.g., metallothionein promoter) or from mammalian viruses (e.g., the adenovirus late promoter, the vaccinia virus 7.5K promoter). Preferably, bacterial cells such as *Escherichia coli*, and more preferably, eukaryotic cells, especially for the expression of whole recombinant antibody molecule, are used for the expression of a recombinant antibody molecule. For example, mammalian cells such as Chinese hamster ovary cells (CHO), in conjunction with a vector such as the major intermediate early gene promoter element from human cytomegalovirus is an effective expression system for antibodies (Foecking et al., *Gene* 45:101 (1986); Cockett et al., *Bio/Technology* 8:2 (1990)).

In bacterial systems, a number of expression vectors may be advantageously selected depending upon the use intended for the antibody molecule being expressed. For example, when a large quantity of such a protein is to be produced, for the generation of pharmaceutical compositions of an antibody molecule, vectors which direct the expression of high levels of fusion protein products that are readily purified may be desirable. Such vectors include, but are not limited, to the *E. coli* expression vector pUR278 (Ruther et al., *EMBO J.* 2:1791 (1983)), in which the antibody coding sequence may be ligated

individually into the vector in frame with the lac Z coding region so that a fusion protein is produced; pIN vectors (Inouye & Inouye, Nucleic Acids Res. 13:3101-3109 (1985); Van Heeke & Schuster, J. Biol. Chem. 24:5503-5509 (1989)); and the like. pGEX vectors may also be used to express foreign polypeptides as fusion proteins with glutathione S-transferase (GST). In general, such fusion proteins are soluble and can easily be purified from lysed cells by adsorption and binding to matrix glutathione-agarose beads followed by elution in the presence of free glutathione. The pGEX vectors are designed to include thrombin or factor Xa protease cleavage sites so that the cloned target gene product can be released from the GST moiety.

In an insect system, *Autographa californica* nuclear polyhedrosis virus (AcNPV) is used as a vector to express foreign genes. The virus grows in *Spodoptera frugiperda* cells. The antibody coding sequence may be cloned individually into non-essential regions (for example the polyhedrin gene) of the virus and placed under control of an AcNPV promoter (for example the polyhedrin promoter).

In mammalian host cells, a number of viral-based expression systems may be utilized. In cases where an adenovirus is used as an expression vector, the antibody coding sequence of interest may be ligated to an adenovirus transcription/translation control complex, e.g., the late promoter and tripartite leader sequence. This chimeric gene may then be inserted in the adenovirus genome by in vitro or in vivo recombination. Insertion in a non-essential region of the viral genome (e.g., region E1 or E3) will result in a recombinant virus that is viable and capable of expressing the antibody molecule in infected hosts. (e.g., see Logan & Shenk, Proc. Natl. Acad. Sci. USA 81:355-359 (1984)). Specific initiation signals may also be required for efficient translation of inserted antibody coding sequences. These signals include the ATG initiation codon and adjacent sequences. Furthermore, the initiation codon must be in phase with the reading frame of the desired coding sequence to ensure translation of the entire insert. These exogenous translational control signals and initiation codons can be of a variety of origins, both natural and synthetic. The efficiency of expression may be enhanced by the inclusion of appropriate transcription enhancer elements, transcription terminators, etc. (see Bittner et al., Methods in Enzymol. 153:51-544 (1987)).

In addition, a host cell strain may be chosen which modulates the expression of the inserted sequences, or modifies and processes the gene product in the specific fashion desired. Such modifications (e.g., glycosylation) and processing (e.g., cleavage) of protein



products may be important for the function of the protein. Different host cells have characteristic and specific mechanisms for the post-translational processing and modification of proteins and gene products. Appropriate cell lines or host systems can be chosen to ensure the correct modification and processing of the foreign protein expressed. To this end, 5 eukaryotic host cells which possess the cellular machinery for proper processing of the primary transcript, glycosylation, and phosphorylation of the gene product may be used. Such mammalian host cells include but are not limited to CHO, VERY, BHK, Hela, COS, MDCK, 293, 3T3, WI38, and in particular, breast cancer cell lines such as, for example, BT483, Hs578T, HTB2, BT20 and T47D, and normal mammary gland cell line such as, for 10 example, CRL7030 and Hs578Bst.

For long-term, high-yield production of recombinant proteins, stable expression is preferred. For example, cell lines which stably express the antibody molecule may be engineered. Rather than using expression vectors which contain viral origins of replication, host cells can be transformed with DNA controlled by appropriate expression control 15 elements (e.g., promoter, enhancer, sequences, transcription terminators, polyadenylation sites, etc.), and a selectable marker. Following the introduction of the foreign DNA, engineered cells may be allowed to grow for 1-2 days in an enriched media, and then are switched to a selective media. The selectable marker in the recombinant plasmid confers resistance to the selection and allows cells to stably integrate the plasmid into their 20 chromosomes and grow to form foci which in turn can be cloned and expanded into cell lines. This method may advantageously be used to engineer cell lines which express the antibody molecule. Such engineered cell lines may be particularly useful in screening and evaluation of compounds that interact directly or indirectly with the antibody molecule.

A number of selection systems may be used, including but not limited to the herpes 25 simplex virus thymidine kinase (Wigler et al., Cell 11:223 (1977)), hypoxanthine-guanine phosphoribosyltransferase (Szybalska & Szybalski, Proc. Natl. Acad. Sci. USA 48:202 (1992)), and adenine phosphoribosyltransferase (Lowy et al., Cell 22:817 (1980)) genes can be employed in tk-, hgp<sup>r</sup>t- or ap<sup>r</sup>t- cells, respectively. Also, antimetabolite resistance can be used as the basis of selection for the following genes: dhfr, which confers resistance to 30 methotrexate (Wigler et al., Natl. Acad. Sci. USA 77:357 (1980); O'Hare et al., Proc. Natl. Acad. Sci. USA 78:1527 (1981)); gpt, which confers resistance to mycophenolic acid (Mulligan & Berg, Proc. Natl. Acad. Sci. USA 78:2072 (1981)); neo, which confers

resistance to the aminoglycoside G-418 *Clinical Pharmacy* 12:488-505; Wu and Wu, *Biotherapy* 3:87-95 (1991); Tolstoshev, *Ann. Rev. Pharmacol. Toxicol.* 32:573-596 (1993); Mulligan, *Science* 260:926-932 (1993); and Morgan and Anderson, *Ann. Rev. Biochem.* 62:191-217 (1993); May, 1993, *TIB TECH* 11(5):155-215; and hygromycin, which confers resistance to hygromycin (Santerre et al., *Gene* 30:147 (1984)). Methods commonly known in the art of recombinant DNA technology may be routinely applied to select the desired recombinant clone, and such methods are described, for example, in Ausubel et al. (eds.), *Current Protocols in Molecular Biology*, John Wiley & Sons, NY (1993); Kriegler, *Gene Transfer and Expression, A Laboratory Manual*, Stockton Press, NY (1990); and in Chapters 12 and 13, Dracopoli et al. (eds.), *Current Protocols in Human Genetics*, John Wiley & Sons, NY (1994); Colberre-Garapin et al., *J. Mol. Biol.* 150:1 (1981), which are incorporated by reference herein in their entireties.

The expression levels of an antibody molecule can be increased by vector amplification (for a review, see Bebbington and Hentschel, *The use of vectors based on gene amplification for the expression of cloned genes in mammalian cells in DNA cloning*, Vol.3. (Academic Press, New York, 1987)). When a marker in the vector system expressing antibody is amplifiable, increase in the level of inhibitor present in culture of host cell will increase the number of copies of the marker gene. Since the amplified region is associated with the antibody gene, production of the antibody will also increase (Crouse et al., *Mol. Cell. Biol.* 3:257 (1983)).

The host cell may be co-transfected with two expression vectors of the invention, the first vector encoding a heavy chain derived polypeptide and the second vector encoding a light chain derived polypeptide. The two vectors may contain identical selectable markers which enable equal expression of heavy and light chain polypeptides. Alternatively, a single vector may be used which encodes, and is capable of expressing, both heavy and light chain polypeptides. In such situations, the light chain should be placed before the heavy chain to avoid an excess of toxic free heavy chain (Proudfoot, *Nature* 322:52 (1986); Kohler, *Proc. Natl. Acad. Sci. USA* 77:2197 (1980)). The coding sequences for the heavy and light chains may comprise cDNA or genomic DNA.

Once an antibody molecule of the invention has been produced by an animal, chemically synthesized, or recombinantly expressed, it may be purified by any method known in the art for purification of an immunoglobulin molecule, for example, by

chromatography (e.g., ion exchange, affinity, particularly by affinity for the specific antigen after Protein A, and sizing column chromatography), centrifugation, differential solubility, or by any other standard technique for the purification of proteins. In addition, the antibodies of the present invention or fragments thereof can be fused to heterologous polypeptide sequences described herein or otherwise known in the art, to facilitate purification.

The present invention encompasses antibodies recombinantly fused or chemically conjugated (including both covalently and non-covalently conjugations) to a polypeptide (or portion thereof, preferably at least 10, 20, 30, 40, 50, 60, 70, 80, 90 or 100 amino acids of the polypeptide) of the present invention to generate fusion proteins. The fusion does not necessarily need to be direct, but may occur through linker sequences. The antibodies may be specific for antigens other than polypeptides (or portion thereof, preferably at least 10, 20, 30, 40, 50, 60, 70, 80, 90 or 100 amino acids of the polypeptide) of the present invention. For example, antibodies may be used to target the polypeptides of the present invention to particular cell types, either in vitro or in vivo, by fusing or conjugating the polypeptides of the present invention to antibodies specific for particular cell surface receptors. Antibodies fused or conjugated to the polypeptides of the present invention may also be used in in vitro immunoassays and purification methods using methods known in the art. See e.g., Harbor et al., supra, and PCT publication WO 93/21232; EP 439,095; Naramura et al., Immunol. Lett. 39:91-99 (1994); U.S. Patent 5,474,981; Gillies et al., PNAS 89:1428-1432 (1992); Fell et al., J. Immunol. 146:2446-2452(1991), which are incorporated by reference in their entireties.

The present invention further includes compositions comprising the polypeptides of the present invention fused or conjugated to antibody domains other than the variable regions. For example, the polypeptides of the present invention may be fused or conjugated to an antibody Fc region, or portion thereof. The antibody portion fused to a polypeptide of the present invention may comprise the constant region, hinge region, CH1 domain, CH2 domain, and CH3 domain or any combination of whole domains or portions thereof. The polypeptides may also be fused or conjugated to the above antibody portions to form multimers. For example, Fc portions fused to the polypeptides of the present invention can form dimers through disulfide bonding between the Fc portions. Higher multimeric forms can be made by fusing the polypeptides to portions of IgA and IgM. Methods for fusing or conjugating the polypeptides of the present invention to antibody portions are known in the art. See, e.g., U.S. Patent Nos. 5,336,603; 5,622,929; 5,359,046; 5,349,053; 5,447,851;

5,112,946; EP 307,434; EP 367,166; PCT publications WO 96/04388; WO 91/06570; Ashkenazi et al., Proc. Natl. Acad. Sci. USA 88:10535-10539 (1991); Zheng et al., J. Immunol. 154:5590-5600 (1995); and Vil et al., Proc. Natl. Acad. Sci. USA 89:11337-11341(1992) (said references incorporated by reference in their entireties).

5 As discussed, supra, the polypeptides corresponding to a polypeptide, polypeptide fragment, or a variant of SEQ ID NO:Y may be fused or conjugated to the above antibody portions to increase the in vivo half life of the polypeptides or for use in immunoassays using methods known in the art. Further, the polypeptides corresponding to SEQ ID NO:Y may be fused or conjugated to the above antibody portions to facilitate purification. One reported  
10 example describes chimeric proteins consisting of the first two domains of the human CD4-polypeptide and various domains of the constant regions of the heavy or light chains of mammalian immunoglobulins. (EP 394,827; Traunecker et al., Nature 331:84-86 (1988). The polypeptides of the present invention fused or conjugated to an antibody having disulfide- linked dimeric structures (due to the IgG) may also be more efficient in binding  
15 and neutralizing other molecules, than the monomeric secreted protein or protein fragment alone. (Fountoulakis et al., J. Biochem. 270:3958-3964 (1995)). In many cases, the Fc part in a fusion protein is beneficial in therapy and diagnosis, and thus can result in, for example, improved pharmacokinetic properties. (EP A 232,262). Alternatively, deleting the Fc part after the fusion protein has been expressed, detected, and purified, would be desired. For  
20 example, the Fc portion may hinder therapy and diagnosis if the fusion protein is used as an antigen for immunizations. In drug discovery, for example, human proteins, such as hIL-5, have been fused with Fc portions for the purpose of high-throughput screening assays to identify antagonists of hIL-5. (See, Bennett et al., J. Molecular Recognition 8:52-58 (1995); Johanson et al., J. Biol. Chem. 270:9459-9471 (1995).

25 Moreover, the antibodies or fragments thereof of the present invention can be fused to marker sequences, such as a peptide to facilitate purification. In preferred embodiments, the marker amino acid sequence is a hexa-histidine peptide, such as the tag provided in a pQE vector (QIAGEN, Inc., 9259 Eton Avenue, Chatsworth, CA, 91311), among others, many of which are commercially available. As described in Gentz et al., Proc. Natl. Acad. Sci. USA  
30 86:821-824 (1989), for instance, hexa-histidine provides for convenient purification of the fusion protein. Other peptide tags useful for purification include, but are not limited to, the

"HA" tag, which corresponds to an epitope derived from the influenza hemagglutinin protein (Wilson et al., Cell 37:767 (1984)) and the "flag" tag.

The present invention further encompasses antibodies or fragments thereof conjugated to a diagnostic or therapeutic agent. The antibodies can be used diagnostically to, for example, monitor the development or progression of a tumor as part of a clinical testing procedure to, e.g., determine the efficacy of a given treatment regimen. Detection can be facilitated by coupling the antibody to a detectable substance. Examples of detectable substances include various enzymes, prosthetic groups, fluorescent materials, luminescent materials, bioluminescent materials, radioactive materials, positron emitting metals using various positron emission tomographies, and nonradioactive paramagnetic metal ions. The detectable substance may be coupled or conjugated either directly to the antibody (or fragment thereof) or indirectly, through an intermediate (such as, for example, a linker known in the art) using techniques known in the art. See, for example, U.S. Patent No. 4,741,900 for metal ions which can be conjugated to antibodies for use as diagnostics according to the present invention. Examples of suitable enzymes include horseradish peroxidase, alkaline phosphatase, beta-galactosidase, or acetylcholinesterase; examples of suitable prosthetic group complexes include streptavidin/biotin and avidin/biotin; examples of suitable fluorescent materials include umbelliferone, fluorescein, fluorescein isothiocyanate, rhodamine, dichlorotriazinylamine fluorescein, dansyl chloride or phycoerythrin; an example of a luminescent material includes luminol; examples of bioluminescent materials include luciferase, luciferin, and aequorin; and examples of suitable radioactive material include  $^{125}\text{I}$ ,  $^{131}\text{I}$ ,  $^{111}\text{In}$  or  $^{99}\text{Tc}$ .

Further, an antibody or fragment thereof may be conjugated to a therapeutic moiety such as a cytotoxin, e.g., a cytostatic or cytocidal agent, a therapeutic agent or a radioactive metal ion, e.g., alpha-emitters such as, for example,  $^{213}\text{Bi}$ . A cytotoxin or cytotoxic agent includes any agent that is detrimental to cells. Examples include paclitaxol, cytochalasin B, gramicidin D, ethidium bromide, emetine, mitomycin, etoposide, tenoposide, vincristine, vinblastine, colchicin, doxorubicin, daunorubicin, dihydroxy anthracin dione, mitoxantrone, mithramycin, actinomycin D, 1-dehydrotestosterone, glucocorticoids, procaine, tetracaine, lidocaine, propranolol, and puromycin and analogs or homologs thereof. Therapeutic agents include, but are not limited to, antimetabolites (e.g., methotrexate, 6-mercaptopurine, 6-thioguanine, cytarabine, 5-fluorouracil decarbazine), alkylating agents (e.g.,

mechlorethamine, thioepa chlorambucil, melphalan, carmustine (BSNU) and lomustine (CCNU), cyclophosphamide, busulfan, dibromomannitol, streptozotocin, mitomycin C, and cis- dichlorodiamine platinum (II) (DDP) cisplatin), anthracyclines (e.g., daunorubicin (formerly daunomycin) and doxorubicin), antibiotics (e.g., dactinomycin (formerly actinomycin), bleomycin, mithramycin, and anthramycin (AMC)), and anti-mitotic agents  
5 (e.g., vincristine and vinblastine).

The conjugates of the invention can be used for modifying a given biological response, the therapeutic agent or drug moiety is not to be construed as limited to classical chemical therapeutic agents. For example, the drug moiety may be a protein or polypeptide  
10 possessing a desired biological activity. Such proteins may include, for example, a toxin such as abrin, ricin A, pseudomonas exotoxin, or diphtheria toxin; a protein such as tumor necrosis factor,  $\alpha$ -interferon,  $\beta$ -interferon, nerve growth factor, platelet derived growth factor, tissue plasminogen activator, an apoptotic agent, e.g., TNF- $\alpha$ , TNF- $\beta$ , AIM I (See, International Publication No. WO 97/33899), AIM II (See, International Publication No. WO  
15 97/34911), Fas Ligand (Takahashi *et al.*, *Int. Immunol.*, 6:1567-1574 (1994)), VEGI (See, International Publication No. WO 99/23105), a thrombotic agent or an anti- angiogenic agent, e.g., angiostatin or endostatin; or, biological response modifiers such as, for example, lymphokines, interleukin-1 ("IL-1"), interleukin-2 ("IL-2"), interleukin-6 ("IL-6"), granulocyte macrophage colony stimulating factor ("GM-CSF"), granulocyte colony  
20 stimulating factor ("G-CSF"), or other growth factors.

Antibodies may also be attached to solid supports, which are particularly useful for immunoassays or purification of the target antigen. Such solid supports include, but are not limited to, glass, cellulose, polyacrylamide, nylon, polystyrene, polyvinyl chloride or polypropylene.

25 Techniques for conjugating such therapeutic moiety to antibodies are well known, see, e.g., Arnon *et al.*, "Monoclonal Antibodies For Immunotargeting Of Drugs In Cancer Therapy", in *Monoclonal Antibodies And Cancer Therapy*, Reisfeld *et al.* (eds.), pp. 243-56 (Alan R. Liss, Inc. 1985); Hellstrom *et al.*, "Antibodies For Drug Delivery", in *Controlled Drug Delivery* (2nd Ed.), Robinson *et al.* (eds.), pp. 623-53 (Marcel Dekker, Inc. 1987);  
30 Thorpe; "Antibody Carriers Of Cytotoxic Agents In Cancer Therapy: A Review", in *Monoclonal Antibodies '84: Biological And Clinical Applications*, Pinchera *et al.* (eds.), pp. 475-506 (1985); "Analysis, Results, And Future Prospective Of The Therapeutic Use Of

Radiolabeled Antibody In Cancer Therapy", in Monoclonal Antibodies For Cancer Detection And Therapy, Baldwin et al. (eds.), pp. 303-16 (Academic Press 1985), and Thorpe et al., "The Preparation And Cytotoxic Properties Of Antibody-Toxin Conjugates", Immunol. Rev. 62:119-58 (1982).

5        Alternatively, an antibody can be conjugated to a second antibody to form an antibody heteroconjugate as described by Segal in U.S. Patent No. 4,676,980, which is incorporated herein by reference in its entirety.

      An antibody, with or without a therapeutic moiety conjugated to it, administered alone or in combination with cytotoxic factor(s) and/or cytokine(s) can be used as a  
10    therapeutic.

### ***Immunophenotyping***

      The antibodies of the invention may be utilized for immunophenotyping of cell lines and biological samples. The translation product of the gene of the present invention may be  
15    useful as a cell specific marker, or more specifically as a cellular marker that is differentially expressed at various stages of differentiation and/or maturation of particular cell types. Monoclonal antibodies directed against a specific epitope, or combination of epitopes, will allow for the screening of cellular populations expressing the marker. Various techniques can be utilized using monoclonal antibodies to screen for cellular populations expressing the  
20    marker(s), and include magnetic separation using antibody-coated magnetic beads, "panning" with antibody attached to a solid matrix (i.e., plate), and flow cytometry (See, e.g., U.S. Patent 5,985,660; and Morrison *et al.*, *Cell*, 96:737-49 (1999)).

      These techniques allow for the screening of particular populations of cells, such as might be found with hematological malignancies (i.e. minimal residual disease (MRD) in  
25    acute leukemic patients) and "non-self" cells in transplantations to prevent Graft-versus-Host Disease (GVHD). Alternatively, these techniques allow for the screening of hematopoietic stem and progenitor cells capable of undergoing proliferation and/or differentiation, as might be found in human umbilical cord blood.

### ***Assays For Antibody Binding***

      The antibodies of the invention may be assayed for immunospecific binding by any method known in the art. The immunoassays which can be used include but are not limited

to competitive and non-competitive assay systems using techniques such as western blots, radioimmunoassays, ELISA (enzyme linked immunosorbent assay), "sandwich" immunoassays, immunoprecipitation assays, precipitin reactions, gel diffusion precipitin reactions, immunodiffusion assays, agglutination assays, complement-fixation assays, immunoradiometric assays, fluorescent immunoassays, protein A immunoassays, to name but a few. Such assays are routine and well known in the art (see, e.g., Ausubel et al, eds, 1994, Current Protocols in Molecular Biology, Vol. 1, John Wiley & Sons, Inc., New York, which is incorporated by reference herein in its entirety). Exemplary immunoassays are described briefly below (but are not intended by way of limitation).

Immunoprecipitation protocols generally comprise lysing a population of cells in a lysis buffer such as RIPA buffer (1% NP-40 or Triton X- 100, 1% sodium deoxycholate, 0.1% SDS, 0.15 M NaCl, 0.01 M sodium phosphate at pH 7.2, 1% Trasylol) supplemented with protein phosphatase and/or protease inhibitors (e.g., EDTA, PMSF, aprotinin, sodium vanadate), adding the antibody of interest to the cell lysate, incubating for a period of time (e.g., 1-4 hours) at 4° C, adding protein A and/or protein G sepharose beads to the cell lysate, incubating for about an hour or more at 4° C, washing the beads in lysis buffer and resuspending the beads in SDS/sample buffer. The ability of the antibody of interest to immunoprecipitate a particular antigen can be assessed by, e.g., western blot analysis. One of skill in the art would be knowledgeable as to the parameters that can be modified to increase the binding of the antibody to an antigen and decrease the background (e.g., pre-clearing the cell lysate with sepharose beads). For further discussion regarding immunoprecipitation protocols see, e.g., Ausubel et al, eds, 1994, Current Protocols in Molecular Biology, Vol. 1, John Wiley & Sons, Inc., New York at 10.16.1.

Western blot analysis generally comprises preparing protein samples, electrophoresis of the protein samples in a polyacrylamide gel (e.g., 8%- 20% SDS-PAGE depending on the molecular weight of the antigen), transferring the protein sample from the polyacrylamide gel to a membrane such as nitrocellulose, PVDF or nylon, blocking the membrane in blocking solution (e.g., PBS with 3% BSA or non-fat milk), washing the membrane in washing buffer (e.g., PBS-Tween 20), blocking the membrane with primary antibody (the antibody of interest) diluted in blocking buffer, washing the membrane in washing buffer, blocking the membrane with a secondary antibody (which recognizes the primary antibody, e.g., an anti-human antibody) conjugated to an enzymatic substrate (e.g., horseradish peroxidase or



alkaline phosphatase) or radioactive molecule (e.g.,  $^{32}\text{P}$  or  $^{125}\text{I}$ ) diluted in blocking buffer, washing the membrane in wash buffer, and detecting the presence of the antigen. One of skill in the art would be knowledgeable as to the parameters that can be modified to increase the signal detected and to reduce the background noise. For further discussion regarding western blot protocols see, e.g., Ausubel et al, eds, 1994, Current Protocols in Molecular Biology, Vol. 1, John Wiley & Sons, Inc., New York at 10.8.1.

ELISAs comprise preparing antigen, coating the well of a 96 well microtiter plate with the antigen, adding the antibody of interest conjugated to a detectable compound such as an enzymatic substrate (e.g., horseradish peroxidase or alkaline phosphatase) to the well and incubating for a period of time, and detecting the presence of the antigen. In ELISAs the antibody of interest does not have to be conjugated to a detectable compound; instead, a second antibody (which recognizes the antibody of interest) conjugated to a detectable compound may be added to the well. Further, instead of coating the well with the antigen, the antibody may be coated to the well. In this case, a second antibody conjugated to a detectable compound may be added following the addition of the antigen of interest to the coated well. One of skill in the art would be knowledgeable as to the parameters that can be modified to increase the signal detected as well as other variations of ELISAs known in the art. For further discussion regarding ELISAs see, e.g., Ausubel et al, eds, 1994, Current Protocols in Molecular Biology, Vol. 1, John Wiley & Sons, Inc., New York at 11.2.1.

The binding affinity of an antibody to an antigen and the off-rate of an antibody-antigen interaction can be determined by competitive binding assays. One example of a competitive binding assay is a radioimmunoassay comprising the incubation of labeled antigen (e.g.,  $^3\text{H}$  or  $^{125}\text{I}$ ) with the antibody of interest in the presence of increasing amounts of unlabeled antigen, and the detection of the antibody bound to the labeled antigen. The affinity of the antibody of interest for a particular antigen and the binding off-rates can be determined from the data by scatchard plot analysis. Competition with a second antibody can also be determined using radioimmunoassays. In this case, the antigen is incubated with antibody of interest conjugated to a labeled compound (e.g.,  $^3\text{H}$  or  $^{125}\text{I}$ ) in the presence of increasing amounts of an unlabeled second antibody.

### ***Therapeutic Uses***

The present invention is further directed to antibody-based therapies which involve administering antibodies of the invention to an animal, preferably a mammal, and most preferably a human, patient for treating one or more of the disclosed diseases, disorders, or conditions. Therapeutic compounds of the invention include, but are not limited to, 5 antibodies of the invention (including fragments, analogs and derivatives thereof as described herein) and nucleic acids encoding antibodies of the invention (including fragments, analogs and derivatives thereof and anti-idiotypic antibodies as described herein). The antibodies of the invention can be used to treat, inhibit or prevent diseases, disorders or conditions associated with aberrant expression and/or activity of a polypeptide of the invention, 10 including, but not limited to, any one or more of the diseases, disorders, or conditions described herein. The treatment and/or prevention of diseases, disorders, or conditions associated with aberrant expression and/or activity of a polypeptide of the invention includes, but is not limited to, alleviating symptoms associated with those diseases, disorders or conditions. Antibodies of the invention may be provided in pharmaceutically acceptable 15 compositions as known in the art or as described herein.

A summary of the ways in which the antibodies of the present invention may be used therapeutically includes binding polynucleotides or polypeptides of the present invention locally or systemically in the body or by direct cytotoxicity of the antibody, e.g. as mediated by complement (CDC) or by effector cells (ADCC). Some of these approaches are 20 described in more detail below. Armed with the teachings provided herein, one of ordinary skill in the art will know how to use the antibodies of the present invention for diagnostic, monitoring or therapeutic purposes without undue experimentation.

The antibodies of this invention may be advantageously utilized in combination with other monoclonal or chimeric antibodies, or with lymphokines or hematopoietic growth 25 factors (such as, e.g., IL-2, IL-3 and IL-7), for example, which serve to increase the number or activity of effector cells which interact with the antibodies.

The antibodies of the invention may be administered alone or in combination with other types of treatments (e.g., radiation therapy, chemotherapy, hormonal therapy, immunotherapy and anti-tumor agents). Generally, administration of products of a species 30 origin or species reactivity (in the case of antibodies) that is the same species as that of the patient is preferred. Thus, in a preferred embodiment, human antibodies, fragments

derivatives, analogs, or nucleic acids, are administered to a human patient for therapy or prophylaxis.

It is preferred to use high affinity and/or potent in vivo inhibiting and/or neutralizing antibodies against polypeptides or polynucleotides of the present invention, fragments or regions thereof, for both immunoassays directed to and therapy of disorders related to polynucleotides or polypeptides, including fragments thereof, of the present invention. Such antibodies, fragments, or regions, will preferably have an affinity for polynucleotides or polypeptides of the invention, including fragments thereof. Preferred binding affinities include those with a dissociation constant or  $K_d$  less than  $5 \times 10^{-2}$  M,  $10^{-2}$  M,  $5 \times 10^{-3}$  M,  $10^{-3}$  M,  $5 \times 10^{-4}$  M,  $10^{-4}$  M,  $5 \times 10^{-5}$  M,  $10^{-5}$  M,  $5 \times 10^{-6}$  M,  $10^{-6}$  M,  $5 \times 10^{-7}$  M,  $10^{-7}$  M,  $5 \times 10^{-8}$  M,  $10^{-8}$  M,  $5 \times 10^{-9}$  M,  $10^{-9}$  M,  $5 \times 10^{-10}$  M,  $10^{-10}$  M,  $5 \times 10^{-11}$  M,  $10^{-11}$  M,  $5 \times 10^{-12}$  M,  $10^{-12}$  M,  $5 \times 10^{-13}$  M,  $10^{-13}$  M,  $5 \times 10^{-14}$  M,  $10^{-14}$  M,  $5 \times 10^{-15}$  M, and  $10^{-15}$  M.

#### ***Gene Therapy***

In a specific embodiment, nucleic acids comprising sequences encoding antibodies or functional derivatives thereof, are administered to treat, inhibit or prevent a disease or disorder associated with aberrant expression and/or activity of a polypeptide of the invention, by way of gene therapy. Gene therapy refers to therapy performed by the administration to a subject of an expressed or expressible nucleic acid. In this embodiment of the invention, the nucleic acids produce their encoded protein that mediates a therapeutic effect.

Any of the methods for gene therapy available in the art can be used according to the present invention. Exemplary methods are described below.

For general reviews of the methods of gene therapy, see Goldspiel et al., *Clinical Pharmacy* 12:488-505 (1993); Wu and Wu, *Biotherapy* 3:87-95 (1991); Tolstoshev, *Ann. Rev. Pharmacol. Toxicol.* 32:573-596 (1993); Mulligan, *Science* 260:926-932 (1993); and Morgan and Anderson, *Ann. Rev. Biochem.* 62:191-217 (1993); May, *TIBTECH* 11(5):155-215 (1993). Methods commonly known in the art of recombinant DNA technology which can be used are described in Ausubel et al. (eds.), *Current Protocols in Molecular Biology*, John Wiley & Sons, NY (1993); and Kriegler, *Gene Transfer and Expression, A Laboratory Manual*, Stockton Press, NY (1990).

In a preferred aspect, the compound comprises nucleic acid sequences encoding an antibody, said nucleic acid sequences being part of expression vectors that express the

antibody or fragments or chimeric proteins or heavy or light chains thereof in a suitable host. In particular, such nucleic acid sequences have promoters operably linked to the antibody coding region, said promoter being inducible or constitutive, and, optionally, tissue-specific. In another particular embodiment, nucleic acid molecules are used in which the antibody coding sequences and any other desired sequences are flanked by regions that promote homologous recombination at a desired site in the genome, thus providing for intrachromosomal expression of the antibody encoding nucleic acids (Koller and Smithies, Proc. Natl. Acad. Sci. USA 86:8932-8935 (1989); Zijlstra et al., Nature 342:435-438 (1989). In specific embodiments, the expressed antibody molecule is a single chain antibody; alternatively, the nucleic acid sequences include sequences encoding both the heavy and light chains, or fragments thereof, of the antibody.

Delivery of the nucleic acids into a patient may be either direct, in which case the patient is directly exposed to the nucleic acid or nucleic acid-carrying vectors, or indirect, in which case, cells are first transformed with the nucleic acids in vitro, then transplanted into the patient. These two approaches are known, respectively, as in vivo or ex vivo gene therapy.

In a specific embodiment, the nucleic acid sequences are directly administered in vivo, where it is expressed to produce the encoded product. This can be accomplished by any of numerous methods known in the art, e.g., by constructing them as part of an appropriate nucleic acid expression vector and administering it so that they become intracellular, e.g., by infection using defective or attenuated retrovirals or other viral vectors (see U.S. Patent No. 4,980,286), or by direct injection of naked DNA, or by use of microparticle bombardment (e.g., a gene gun; Biolistic, Dupont), or coating with lipids or cell-surface receptors or transfecting agents, encapsulation in liposomes, microparticles, or microcapsules, or by administering them in linkage to a peptide which is known to enter the nucleus, by administering it in linkage to a ligand subject to receptor-mediated endocytosis (see, e.g., Wu and Wu, J. Biol. Chem. 262:4429-4432 (1987)) (which can be used to target cell types specifically expressing the receptors), etc. In another embodiment, nucleic acid-ligand complexes can be formed in which the ligand comprises a fusogenic viral peptide to disrupt endosomes, allowing the nucleic acid to avoid lysosomal degradation. In yet another embodiment, the nucleic acid can be targeted in vivo for cell specific uptake and expression, by targeting a specific receptor (see, e.g., PCT Publications WO 92/06180; WO 92/22635;

WO92/20316; WO93/14188, WO 93/20221). Alternatively, the nucleic acid can be introduced intracellularly and incorporated within host cell DNA for expression, by homologous recombination (Koller and Smithies, Proc. Natl. Acad. Sci. USA 86:8932-8935 (1989); Zijlstra et al., Nature 342:435-438 (1989)).

5 In a specific embodiment, viral vectors that contains nucleic acid sequences encoding an antibody of the invention are used. For example, a retroviral vector can be used (see Miller et al., Meth. Enzymol. 217:581-599 (1993)). These retroviral vectors contain the components necessary for the correct packaging of the viral genome and integration into the host cell DNA. The nucleic acid sequences encoding the antibody to be used in gene therapy  
10 are cloned into one or more vectors, which facilitates delivery of the gene into a patient. More detail about retroviral vectors can be found in Boesen et al., Biotherapy 6:291-302 (1994), which describes the use of a retroviral vector to deliver the *mdr1* gene to hematopoietic stem cells in order to make the stem cells more resistant to chemotherapy. Other references illustrating the use of retroviral vectors in gene therapy are: Clowes et al., J.  
15 Clin. Invest. 93:644-651 (1994); Kiem et al., Blood 83:1467-1473 (1994); Salmons and Gunzberg, Human Gene Therapy 4:129-141 (1993); and Grossman and Wilson, Curr. Opin. in Genetics and Devel. 3:110-114 (1993).

Adenoviruses are other viral vectors that can be used in gene therapy. Adenoviruses are especially attractive vehicles for delivering genes to respiratory epithelia. Adenoviruses  
20 naturally infect respiratory epithelia where they cause a mild disease. Other targets for adenovirus-based delivery systems are liver, the central nervous system, endothelial cells, and muscle. Adenoviruses have the advantage of being capable of infecting non-dividing cells. Kozarsky and Wilson, Current Opinion in Genetics and Development 3:499-503 (1993) present a review of adenovirus-based gene therapy. Bout et al., Human Gene  
25 Therapy 5:3-10 (1994) demonstrated the use of adenovirus vectors to transfer genes to the respiratory epithelia of rhesus monkeys. Other instances of the use of adenoviruses in gene therapy can be found in Rosenfeld et al., Science 252:431-434 (1991); Rosenfeld et al., Cell 68:143-155 (1992); Mastrangeli et al., J. Clin. Invest. 91:225-234 (1993); PCT Publication WO94/12649; and Wang, et al., Gene Therapy 2:775-783 (1995). In a preferred  
30 embodiment, adenovirus vectors are used.

Adeno-associated virus (AAV) has also been proposed for use in gene therapy (Walsh et al., Proc. Soc. Exp. Biol. Med. 204:289-300 (1993); U.S. Patent No. 5,436,146).

Another approach to gene therapy involves transferring a gene to cells in tissue culture by such methods as electroporation, lipofection, calcium phosphate mediated transfection, or viral infection. Usually, the method of transfer includes the transfer of a selectable marker to the cells. The cells are then placed under selection to isolate those cells that have taken up and are expressing the transferred gene. Those cells are then delivered to a patient.

In this embodiment, the nucleic acid is introduced into a cell prior to administration in vivo of the resulting recombinant cell. Such introduction can be carried out by any method known in the art, including but not limited to transfection, electroporation, microinjection, infection with a viral or bacteriophage vector containing the nucleic acid sequences, cell fusion, chromosome-mediated gene transfer, microcell-mediated gene transfer, spheroplast fusion, etc. Numerous techniques are known in the art for the introduction of foreign genes into cells (see, e.g., Loeffler and Behr, *Meth. Enzymol.* 217:599-618 (1993); Cohen et al., *Meth. Enzymol.* 217:618-644 (1993); Cline, *Pharmac. Ther.* 29:69-92m (1985) and may be used in accordance with the present invention, provided that the necessary developmental and physiological functions of the recipient cells are not disrupted. The technique should provide for the stable transfer of the nucleic acid to the cell, so that the nucleic acid is expressible by the cell and preferably heritable and expressible by its cell progeny.

The resulting recombinant cells can be delivered to a patient by various methods known in the art. Recombinant blood cells (e.g., hematopoietic stem or progenitor cells) are preferably administered intravenously. The amount of cells envisioned for use depends on the desired effect, patient state, etc., and can be determined by one skilled in the art.

Cells into which a nucleic acid can be introduced for purposes of gene therapy encompass any desired, available cell type, and include but are not limited to epithelial cells, endothelial cells, keratinocytes, fibroblasts, muscle cells, hepatocytes; blood cells such as Tlymphocytes, Blymphocytes, monocytes, macrophages, neutrophils, eosinophils, megakaryocytes, granulocytes; various stem or progenitor cells, in particular hematopoietic stem or progenitor cells, e.g., as obtained from bone marrow, umbilical cord blood, peripheral blood, fetal liver, etc.

In a preferred embodiment, the cell used for gene therapy is autologous to the patient.

In an embodiment in which recombinant cells are used in gene therapy, nucleic acid sequences encoding an antibody are introduced into the cells such that they are expressible

by the cells or their progeny, and the recombinant cells are then administered in vivo for therapeutic effect. In a specific embodiment, stem or progenitor cells are used. Any stem and/or progenitor cells which can be isolated and maintained in vitro can potentially be used in accordance with this embodiment of the present invention (see e.g. PCT Publication  
5 WO 94/08598; Stemple and Anderson, Cell 71:973-985 (1992); Rheinwald, Meth. Cell Bio. 21A:229 (1980); and Pittelkow and Scott, Mayo Clinic Proc. 61:771 (1986)).

In a specific embodiment, the nucleic acid to be introduced for purposes of gene therapy comprises an inducible promoter operably linked to the coding region, such that expression of the nucleic acid is controllable by controlling the presence or absence of the  
10 appropriate inducer of transcription.

#### ***Demonstration of Therapeutic or Prophylactic Activity***

The compounds or pharmaceutical compositions of the invention are preferably tested in vitro, and then in vivo for the desired therapeutic or prophylactic activity, prior to use in  
15 humans. For example, in vitro assays to demonstrate the therapeutic or prophylactic utility of a compound or pharmaceutical composition include, the effect of a compound on a cell line or a patient tissue sample. The effect of the compound or composition on the cell line and/or tissue sample can be determined utilizing techniques known to those of skill in the art including, but not limited to, rosette formation assays and cell lysis assays. In accordance  
20 with the invention, in vitro assays which can be used to determine whether administration of a specific compound is indicated, include in vitro cell culture assays in which a patient tissue sample is grown in culture, and exposed to or otherwise administered a compound, and the effect of such compound upon the tissue sample is observed.

#### ***Therapeutic/Prophylactic Administration and Composition***

The invention provides methods of treatment, inhibition and prophylaxis by administration to a subject of an effective amount of a compound or pharmaceutical composition of the invention, preferably an antibody of the invention. In a preferred aspect, the compound is substantially purified (e.g., substantially free from substances that limit its  
30 effect or produce undesired side-effects). The subject is preferably an animal, including but not limited to animals such as cows, pigs, horses, chickens, cats, dogs, etc., and is preferably a mammal, and most preferably human.

Formulations and methods of administration that can be employed when the compound comprises a nucleic acid or an immunoglobulin are described above; additional appropriate formulations and routes of administration can be selected from among those described herein below.

5 Various delivery systems are known and can be used to administer a compound of the invention, e.g., encapsulation in liposomes, microparticles, microcapsules, recombinant cells capable of expressing the compound, receptor-mediated endocytosis (see, e.g., Wu and Wu, J. Biol. Chem. 262:4429-4432 (1987)), construction of a nucleic acid as part of a retroviral or other vector, etc. Methods of introduction include but are not limited to intradermal, 10 intramuscular, intraperitoneal, intravenous, subcutaneous, intranasal, epidural, and oral routes. The compounds or compositions may be administered by any convenient route, for example by infusion or bolus injection, by absorption through epithelial or mucocutaneous linings (e.g., oral mucosa, rectal and intestinal mucosa, etc.) and may be administered together with other biologically active agents. Administration can be systemic or local. In 15 addition, it may be desirable to introduce the pharmaceutical compounds or compositions of the invention into the central nervous system by any suitable route, including intraventricular and intrathecal injection; intraventricular injection may be facilitated by an intraventricular catheter, for example, attached to a reservoir, such as an Ommaya reservoir. Pulmonary administration can also be employed, e.g., by use of an inhaler or nebulizer, and formulation 20 with an aerosolizing agent.

In a specific embodiment, it may be desirable to administer the pharmaceutical compounds or compositions of the invention locally to the area in need of treatment; this may be achieved by, for example, and not by way of limitation, local infusion during surgery, topical application, e.g., in conjunction with a wound dressing after surgery, by injection, by 25 means of a catheter, by means of a suppository, or by means of an implant, said implant being of a porous, non-porous, or gelatinous material, including membranes, such as sialastic membranes, or fibers. Preferably, when administering a protein, including an antibody, of the invention, care must be taken to use materials to which the protein does not absorb.

In another embodiment, the compound or composition can be delivered in a vesicle, 30 in particular a liposome (see Langer, Science 249:1527-1533 (1990); Treat et al., in Liposomes in the Therapy of Infectious Disease and Cancer, Lopez-Berestein and Fidler



(eds.), Liss, New York, pp. 353- 365 (1989); Lopez-Berestein, *ibid.*, pp. 317-327; see generally *ibid.*)

In yet another embodiment, the compound or composition can be delivered in a controlled release system. In one embodiment, a pump may be used (see Langer, *supra*;  
5 Sefton, *CRC Crit. Ref. Biomed. Eng.* 14:201 (1987); Buchwald et al., *Surgery* 88:507 (1980); Saudek et al., *N. Engl. J. Med.* 321:574 (1989)). In another embodiment, polymeric materials can be used (see *Medical Applications of Controlled Release*, Langer and Wise (eds.), CRC Pres., Boca Raton, Florida (1974); *Controlled Drug Bioavailability, Drug Product Design and Performance*, Smolen and Ball (eds.), Wiley, New York (1984); Ranger  
10 and Peppas, J., *Macromol. Sci. Rev. Macromol. Chem.* 23:61 (1983); see also Levy et al., *Science* 228:190 (1985); During et al., *Ann. Neurol.* 25:351 (1989); Howard et al., *J. Neurosurg.* 71:105 (1989)). In yet another embodiment, a controlled release system can be placed in proximity of the therapeutic target, i.e., the brain, thus requiring only a fraction of the systemic dose (see, e.g., Goodson, in *Medical Applications of Controlled Release*, *supra*,  
15 vol. 2, pp. 115-138 (1984)).

Other controlled release systems are discussed in the review by Langer (*Science* 249:1527-1533 (1990)).

In a specific embodiment where the compound of the invention is a nucleic acid encoding a protein, the nucleic acid can be administered in vivo to promote expression of its  
20 encoded protein, by constructing it as part of an appropriate nucleic acid expression vector and administering it so that it becomes intracellular, e.g., by use of a retroviral vector (see U.S. Patent No. 4,980,286), or by direct injection, or by use of microparticle bombardment (e.g., a gene gun; Biolistic, Dupont), or coating with lipids or cell-surface receptors or transfecting agents, or by administering it in linkage to a homeobox- like peptide which is  
25 known to enter the nucleus (see e.g., Joliot et al., *Proc. Natl. Acad. Sci. USA* 88:1864-1868 (1991)), etc. Alternatively, a nucleic acid can be introduced intracellularly and incorporated within host cell DNA for expression, by homologous recombination.

The present invention also provides pharmaceutical compositions. Such compositions comprise a therapeutically effective amount of a compound, and a pharmaceutically  
30 acceptable carrier. In a specific embodiment, the term "pharmaceutically acceptable" means approved by a regulatory agency of the Federal or a state government or listed in the U.S. Pharmacopeia or other generally recognized pharmacopeia for use in animals, and more

particularly in humans. The term "carrier" refers to a diluent, adjuvant, excipient, or vehicle with which the therapeutic is administered. Such pharmaceutical carriers can be sterile liquids, such as water and oils, including those of petroleum, animal, vegetable or synthetic origin, such as peanut oil, soybean oil, mineral oil, sesame oil and the like. Water is a preferred carrier when the pharmaceutical composition is administered intravenously. Saline solutions and aqueous dextrose and glycerol solutions can also be employed as liquid carriers, particularly for injectable solutions. Suitable pharmaceutical excipients include starch, glucose, lactose, sucrose, gelatin, malt, rice, flour, chalk, silica gel, sodium stearate, glycerol monostearate, talc, sodium chloride, dried skim milk, glycerol, propylene, glycol, water, ethanol and the like. The composition, if desired, can also contain minor amounts of wetting or emulsifying agents, or pH buffering agents. These compositions can take the form of solutions, suspensions, emulsion, tablets, pills, capsules, powders, sustained-release formulations and the like. The composition can be formulated as a suppository, with traditional binders and carriers such as triglycerides. Oral formulation can include standard carriers such as pharmaceutical grades of mannitol, lactose, starch, magnesium stearate, sodium saccharine, cellulose, magnesium carbonate, etc. Examples of suitable pharmaceutical carriers are described in "Remington's Pharmaceutical Sciences" by E.W. Martin. Such compositions will contain a therapeutically effective amount of the compound, preferably in purified form, together with a suitable amount of carrier so as to provide the form for proper administration to the patient. The formulation should suit the mode of administration.

In a preferred embodiment, the composition is formulated in accordance with routine procedures as a pharmaceutical composition adapted for intravenous administration to human beings. Typically, compositions for intravenous administration are solutions in sterile isotonic aqueous buffer. Where necessary, the composition may also include a solubilizing agent and a local anesthetic such as lignocaine to ease pain at the site of the injection. Generally, the ingredients are supplied either separately or mixed together in unit dosage form, for example, as a dry lyophilized powder or water free concentrate in a hermetically sealed container such as an ampoule or sachette indicating the quantity of active agent. Where the composition is to be administered by infusion, it can be dispensed with an infusion bottle containing sterile pharmaceutical grade water or saline. Where the

composition is administered by injection, an ampoule of sterile water for injection or saline can be provided so that the ingredients may be mixed prior to administration.

The compounds of the invention can be formulated as neutral or salt forms. Pharmaceutically acceptable salts include those formed with anions such as those derived from hydrochloric, phosphoric, acetic, oxalic, tartaric acids, etc., and those formed with  
5 cations such as those derived from sodium, potassium, ammonium, calcium, ferric hydroxides, isopropylamine, triethylamine, 2-ethylamino ethanol, histidine, procaine, etc.

The amount of the compound of the invention which will be effective in the treatment, inhibition and prevention of a disease or disorder associated with aberrant  
10 expression and/or activity of a polypeptide of the invention can be determined by standard clinical techniques. In addition, in vitro assays may optionally be employed to help identify optimal dosage ranges. The precise dose to be employed in the formulation will also depend on the route of administration, and the seriousness of the disease or disorder, and should be decided according to the judgment of the practitioner and each patient's circumstances.  
15 Effective doses may be extrapolated from dose-response curves derived from in vitro or animal model test systems.

For antibodies, the dosage administered to a patient is typically 0.1 mg/kg to 100 mg/kg of the patient's body weight. Preferably, the dosage administered to a patient is between 0.1 mg/kg and 20 mg/kg of the patient's body weight, more preferably 1 mg/kg to  
20 10 mg/kg of the patient's body weight. Generally, human antibodies have a longer half-life within the human body than antibodies from other species due to the immune response to the foreign polypeptides. Thus, lower dosages of human antibodies and less frequent administration is often possible. Further, the dosage and frequency of administration of antibodies of the invention may be reduced by enhancing uptake and tissue penetration (e.g.,  
25 into the brain) of the antibodies by modifications such as, for example, lipidation.

The invention also provides a pharmaceutical pack or kit comprising one or more containers filled with one or more of the ingredients of the pharmaceutical compositions of the invention. Optionally associated with such container(s) can be a notice in the form prescribed by a governmental agency regulating the manufacture, use or sale of  
30 pharmaceuticals or biological products, which notice reflects approval by the agency of manufacture, use or sale for human administration.

***Diagnosis and Imaging***

Labeled antibodies, and derivatives and analogs thereof, which specifically bind to a polypeptide of interest can be used for diagnostic purposes to detect, diagnose, or monitor diseases, disorders, and/or conditions associated with the aberrant expression and/or activity of a polypeptide of the invention. The invention provides for the detection of aberrant expression of a polypeptide of interest, comprising (a) assaying the expression of the polypeptide of interest in cells or body fluid of an individual using one or more antibodies specific to the polypeptide interest and (b) comparing the level of gene expression with a standard gene expression level, whereby an increase or decrease in the assayed polypeptide gene expression level compared to the standard expression level is indicative of aberrant expression.

The invention provides a diagnostic assay for diagnosing a disorder, comprising (a) assaying the expression of the polypeptide of interest in cells or body fluid of an individual using one or more antibodies specific to the polypeptide interest and (b) comparing the level of gene expression with a standard gene expression level, whereby an increase or decrease in the assayed polypeptide gene expression level compared to the standard expression level is indicative of a particular disorder. With respect to cancer, the presence of a relatively high amount of transcript in biopsied tissue from an individual may indicate a predisposition for the development of the disease, or may provide a means for detecting the disease prior to the appearance of actual clinical symptoms. A more definitive diagnosis of this type may allow health professionals to employ preventative measures or aggressive treatment earlier thereby preventing the development or further progression of the cancer.

Antibodies of the invention can be used to assay protein levels in a biological sample using classical immunohistological methods known to those of skill in the art (e.g., see Jalkanen, et al., J. Cell. Biol. 101:976-985 (1985); Jalkanen, et al., J. Cell Biol. 105:3087-3096 (1987)). Other antibody-based methods useful for detecting protein gene expression include immunoassays, such as the enzyme linked immunosorbent assay (ELISA) and the radioimmunoassay (RIA). Suitable antibody assay labels are known in the art and include enzyme labels, such as, glucose oxidase; radioisotopes, such as iodine (125I, 121I), carbon (14C), sulfur (35S), tritium (3H), indium (112In), and technetium (99Tc); luminescent labels, such as luminol; and fluorescent labels, such as fluorescein and rhodamine, and biotin.

One aspect of the invention is the detection and diagnosis of a disease or disorder associated with aberrant expression of a polypeptide of interest in an animal, preferably a mammal and most preferably a human. In one embodiment, diagnosis comprises: a) administering (for example, parenterally, subcutaneously, or intraperitoneally) to a subject an effective amount of a labeled molecule which specifically binds to the polypeptide of interest; b) waiting for a time interval following the administering for permitting the labeled molecule to preferentially concentrate at sites in the subject where the polypeptide is expressed (and for unbound labeled molecule to be cleared to background level); c) determining background level; and d) detecting the labeled molecule in the subject, such that detection of labeled molecule above the background level indicates that the subject has a particular disease or disorder associated with aberrant expression of the polypeptide of interest. Background level can be determined by various methods including, comparing the amount of labeled molecule detected to a standard value previously determined for a particular system.

It will be understood in the art that the size of the subject and the imaging system used will determine the quantity of imaging moiety needed to produce diagnostic images. In the case of a radioisotope moiety, for a human subject, the quantity of radioactivity injected will normally range from about 5 to 20 millicuries of <sup>99m</sup>Tc. The labeled antibody or antibody fragment will then preferentially accumulate at the location of cells which contain the specific protein. In vivo tumor imaging is described in S.W. Burchiel et al., "Immunopharmacokinetics of Radiolabeled Antibodies and Their Fragments." (Chapter 13 in Tumor Imaging: The Radiochemical Detection of Cancer, S.W. Burchiel and B. A. Rhodes, eds., Masson Publishing Inc. (1982).

Depending on several variables, including the type of label used and the mode of administration, the time interval following the administration for permitting the labeled molecule to preferentially concentrate at sites in the subject and for unbound labeled molecule to be cleared to background level is 6 to 48 hours or 6 to 24 hours or 6 to 12 hours. In another embodiment the time interval following administration is 5 to 20 days or 5 to 10 days.

In an embodiment, monitoring of the disease or disorder is carried out by repeating the method for diagnosing the disease or disorder, for example, one month after initial diagnosis, six months after initial diagnosis, one year after initial diagnosis, etc.

Presence of the labeled molecule can be detected in the patient using methods known in the art for in vivo scanning. These methods depend upon the type of label used. Skilled artisans will be able to determine the appropriate method for detecting a particular label. Methods and devices that may be used in the diagnostic methods of the invention  
5 include, but are not limited to, computed tomography (CT), whole body scan such as position emission tomography (PET), magnetic resonance imaging (MRI), and sonography.

In a specific embodiment, the molecule is labeled with a radioisotope and is detected in the patient using a radiation responsive surgical instrument (Thurston et al., U.S. Patent No. 5,441,050). In another embodiment, the molecule is labeled with a fluorescent  
10 compound and is detected in the patient using a fluorescence responsive scanning instrument. In another embodiment, the molecule is labeled with a positron emitting metal and is detected in the patient using positron emission-tomography. In yet another embodiment, the molecule is labeled with a paramagnetic label and is detected in a patient using magnetic resonance imaging (MRI).

15

### ***Kits***

The present invention provides kits that can be used in the above methods. In one embodiment, a kit comprises an antibody of the invention, preferably a purified antibody, in one or more containers. In a specific embodiment, the kits of the present invention contain a  
20 substantially isolated polypeptide comprising an epitope which is specifically immunoreactive with an antibody included in the kit. Preferably, the kits of the present invention further comprise a control antibody which does not react with the polypeptide of interest. In another specific embodiment, the kits of the present invention contain a means for detecting the binding of an antibody to a polypeptide of interest (e.g., the antibody may be  
25 conjugated to a detectable substrate such as a fluorescent compound, an enzymatic substrate, a radioactive compound or a luminescent compound; or a second antibody which recognizes the first antibody may be conjugated to a detectable substrate).

In another specific embodiment of the present invention, the kit is a diagnostic kit for use in screening serum containing antibodies specific against proliferative and/or cancerous  
30 polynucleotides and polypeptides. Such a kit may include a control antibody that does not react with the polypeptide of interest. Such a kit may include a substantially isolated polypeptide antigen comprising an epitope which is specifically immunoreactive with at least

one anti-polypeptide antigen antibody. Further, such a kit includes means for detecting the binding of said antibody to the antigen (e.g., the antibody may be conjugated to a fluorescent compound such as fluorescein or rhodamine which can be detected by flow cytometry). In specific embodiments, the kit may include a recombinantly produced or  
5 chemically synthesized polypeptide antigen. The polypeptide antigen of the kit may also be attached to a solid support.

In a more specific embodiment the detecting means of the above-described kit includes a solid support to which said polypeptide antigen is attached. Such a kit may also include a non-attached reporter-labeled anti-human antibody. In this embodiment, binding of  
10 the antibody to the polypeptide antigen can be detected by binding of the said reporter-labeled antibody.

In an additional embodiment, the invention includes a diagnostic kit for use in screening serum containing antigens of the polypeptide of the invention. The diagnostic kit includes a substantially isolated antibody specifically immunoreactive with polypeptide or  
15 polynucleotide antigens, and means for detecting the binding of the polynucleotide or polypeptide antigen to the antibody. In one embodiment, the antibody is attached to a solid support. In a specific embodiment, the antibody may be a monoclonal antibody. The detecting means of the kit may include a second, labeled monoclonal antibody. Alternatively, or in addition, the detecting means may include a labeled, competing antigen.

20 In one diagnostic configuration, test serum is reacted with a solid phase reagent having a surface-bound antigen obtained by the methods of the present invention. After binding with specific antigen antibody to the reagent and removing unbound serum components by washing, the reagent is reacted with reporter-labeled anti-human antibody to bind reporter to the reagent in proportion to the amount of bound anti-antigen antibody on the  
25 solid support. The reagent is again washed to remove unbound labeled antibody, and the amount of reporter associated with the reagent is determined. Typically, the reporter is an enzyme which is detected by incubating the solid phase in the presence of a suitable fluorometric, luminescent or colorimetric substrate (Sigma, St. Louis, MO).

The solid surface reagent in the above assay is prepared by known techniques for  
30 attaching protein material to solid support material, such as polymeric beads, dip sticks, 96-well plate or filter material. These attachment methods generally include non-specific adsorption of the protein to the support or covalent attachment of the protein, typically

through a free amine group, to a chemically reactive group on the solid support, such as an activated carboxyl, hydroxyl, or aldehyde group. Alternatively, streptavidin coated plates can be used in conjunction with biotinylated antigen(s).

Thus, the invention provides an assay system or kit for carrying out this diagnostic method. The kit generally includes a support with surface-bound recombinant antigens, and a reporter-labeled anti-human antibody for detecting surface-bound anti-antigen antibody.

### **Fusion Proteins**

Any colon and/or colon cancer related polypeptide of the invention can be used to generate fusion proteins. For example, a colon and/or colon cancer related polypeptide, when fused to a second protein, can be used as an antigenic tag. Antibodies raised against the colon and/or colon cancer related polypeptide can be used to indirectly detect the second protein by binding to the colon and/or colon cancer related polypeptide. Moreover, because secreted proteins target cellular locations based on trafficking signals, the colon and/or colon cancer related polypeptides can be used as targeting molecules once fused to other proteins.

Examples of domains that can be fused to colon and/or colon cancer related polypeptides include not only heterologous signal sequences, but also other heterologous functional regions. The fusion does not necessarily need to be direct, but may occur through linker sequences.

Moreover, fusion proteins may also be engineered to improve characteristics of the colon and/or colon cancer related polypeptide. For instance, a region of additional amino acids, particularly charged amino acids, may be added to the N-terminus of the colon and/or colon cancer related polypeptide to improve stability and persistence during purification from the host cell or subsequent handling and storage. Also, peptide moieties may be added to the colon and/or colon cancer related polypeptide to facilitate purification. Such regions may be removed prior to final preparation of the colon and/or colon cancer related protein. The addition of peptide moieties to facilitate handling of polypeptides are familiar and routine techniques in the art.

As one of skill in the art will appreciate, polypeptides of the present invention and the epitope-bearing fragments thereof described above, can be combined with heterologous polypeptide sequences. For example, the polypeptides of the present invention may be fused with heterologous polypeptide sequences, for example, the polypeptides of the present



invention may be fused with parts of the constant domain of immunoglobulins (IgA, IgE, IgG, IgM) or portions thereof (CH1, CH2, CH3, and any combination thereof, including both entire domains and portions thereof), resulting in chimeric polypeptides. These fusion proteins facilitate purification and show an increased half-life in vivo. One reported example  
5 describes chimeric proteins consisting of the first two domains of the human CD4-polypeptide and various domains of the constant regions of the heavy or light chains of mammalian immunoglobulins. (EP A 394,827; Traunecker et al., Nature 331:84-86 (1988).) Fusion proteins having disulfide-linked dimeric structures (due to the IgG) can also be more efficient in binding and neutralizing other molecules, than the monomeric secreted protein or  
10 protein fragment alone. (Fountoulakis et al., J. Biochem. 270:3958-3964 (1995).)

Similarly, EP-A-O 464 533 (Canadian counterpart 2045869) discloses fusion proteins comprising various portions of constant region of immunoglobulin molecules together with another human protein or part thereof. In many cases, the Fc part in a fusion protein is beneficial in therapy and diagnosis, and thus can result in, for example, improved  
15 pharmacokinetic properties. (EP-A 0232 262.) Alternatively, deleting the Fc part after the fusion protein has been expressed, detected, and purified, would be desired. For example, the Fc portion may hinder therapy and diagnosis if the fusion protein is used as an antigen for immunizations. In drug discovery, for example, human proteins, such as hIL-5, have been fused with Fc portions for the purpose of high-throughput screening assays to identify  
20 antagonists of hIL-5. (See, D. Bennett et al., J. Molecular Recognition 8:52-58 (1995); K. Johanson et al., J. Biol. Chem. 270:9459-9471 (1995).)

Moreover, the colon and/or colon cancer related polypeptides can be fused to marker sequences, such as a peptide which facilitates purification of any colon and/or colon cancer related polypeptide. In preferred embodiments, the marker amino acid sequence is a hexa-  
25 histidine peptide, such as the tag provided in a pQE vector (QIAGEN, Inc., 9259 Eton Avenue, Chatsworth, CA, 91311), among others, many of which are commercially available. As described in Gentz et al., Proc. Natl. Acad. Sci. USA 86:821-824 (1989), for instance, hexa-histidine provides for convenient purification of the fusion protein. Another peptide tag useful for purification, the "HA" tag, corresponds to an epitope derived from the influenza  
30 hemagglutinin protein. (Wilson et al., Cell 37:767 (1984).)

Thus, any of these above fusions can be engineered using the colon and/or colon cancer related polynucleotides or the polypeptides.

**Vectors, Host Cells, and Protein Production**

The present invention also relates to vectors containing the polynucleotide of the present invention, host cells, and the production of polypeptides by recombinant techniques.

5 The vector may be, for example, a phage, plasmid, viral, or retroviral vector. Retroviral vectors may be replication competent or replication defective. In the latter case, viral propagation generally will occur only in complementing host cells.

The colon and/or colon cancer related polynucleotides may be joined to a vector containing a selectable marker for propagation in a host. Generally, a plasmid vector is  
10 introduced in a precipitate, such as a calcium phosphate precipitate, or in a complex with a charged lipid. If the vector is a virus, it may be packaged in vitro using an appropriate packaging cell line and then transduced into host cells.

The polynucleotide insert should be operatively linked to an appropriate promoter, such as the phage lambda PL promoter, the E. coli lac, trp, phoA and tac promoters, the SV40  
15 early and late promoters and promoters of retroviral LTRs, to name a few. Other suitable promoters will be known to the skilled artisan. The expression constructs will further contain sites for transcription initiation, termination, and, in the transcribed region, a ribosome binding site for translation. The coding portion of the transcripts expressed by the constructs will preferably include a translation initiating codon at the beginning and a termination codon  
20 (UAA, UGA or UAG) appropriately positioned at the end of the polypeptide to be translated.

As indicated, the expression vectors will preferably include at least one selectable marker. Such markers include dihydrofolate reductase, G418 or neomycin resistance for eukaryotic cell culture and tetracycline, kanamycin or ampicillin resistance genes for culturing in E. coli and other bacteria. Representative examples of appropriate hosts include,  
25 but are not limited to, bacterial cells, such as E. coli, Streptomyces and Salmonella typhimurium cells; fungal cells, such as yeast cells (e.g., Saccharomyces cerevisiae or Pichia pastoris (ATCC Accession No. 201178)); insect cells such as Drosophila S2 and Spodoptera Sf9 cells; animal cells such as CHO, COS, 293, and Bowes melanoma cells; and plant cells. Appropriate culture mediums and conditions for the above-described host cells are known in  
30 the art.

Among vectors preferred for use in bacteria include pQE70, pQE60 and pQE-9, available from QIAGEN, Inc.; pBluescript vectors, Phagescript vectors, pNH8A, pNH16a,

pNH18A, pNH46A, available from Stratagene Cloning Systems, Inc.; and ptrc99a, pKK223-3, pKK233-3, pDR540, pRIT5 available from Pharmacia Biotech, Inc. Among preferred eukaryotic vectors are pWLNEO, pSV2CAT, pOG44, pXT1 and pSG available from Stratagene; and pSVK3, pBPV, pMSG and pSVL available from Pharmacia.

5 Preferred expression vectors for use in yeast systems include, but are not limited to pYES2, pYD1, pTEF1/Zeo, pYES2/GS, pPICZ, pGAPZ, pGAPZalph, pPIC9, pPIC3.5, pHIL-D2, pHIL-S1, pPIC3.5K, pPIC9K, and PAO815 (all available from Invitrogen, Carlsbad, CA). Other suitable vectors will be readily apparent to the skilled artisan.

10 Introduction of the construct into the host cell can be effected by calcium phosphate transfection, DEAE-dextran mediated transfection, cationic lipid-mediated transfection, electroporation, transduction, infection, or other methods. Such methods are described in many standard laboratory manuals, such as Davis et al., Basic Methods In Molecular Biology (1986). It is specifically contemplated that the polypeptides of the present invention may in fact be expressed by a host cell lacking a recombinant vector.

15 A polypeptide of this invention can be recovered and purified from recombinant cell cultures by well-known methods including ammonium sulfate or ethanol precipitation, acid extraction, anion or cation exchange chromatography, phosphocellulose chromatography, hydrophobic interaction chromatography, affinity chromatography, hydroxylapatite chromatography and lectin chromatography. Most preferably, high performance liquid chromatography ("HPLC") is employed for purification.

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Polypeptides of the present invention can also be recovered from: products purified from natural sources, including bodily fluids, tissues and cells, whether directly isolated or cultured; products of chemical synthetic procedures; and products produced by recombinant techniques from a prokaryotic or eukaryotic host, including, for example, bacterial, yeast,

25 higher plant, insect, and mammalian cells. Depending upon the host employed in a recombinant production procedure, the polypeptides of the present invention may be glycosylated or may be non-glycosylated. In addition, polypeptides of the invention may also include an initial modified methionine residue, in some cases as a result of host-mediated processes. Thus, it is well known in the art that the N-terminal methionine encoded

30 by the translation initiation codon generally is removed with high efficiency from any protein after translation in all eukaryotic cells. While the N-terminal methionine on most proteins also is efficiently removed in most prokaryotes, for some proteins, this prokaryotic removal

process is inefficient, depending on the nature of the amino acid to which the N-terminal methionine is covalently linked.

In one embodiment, the yeast *Pichia pastoris* is used to express any colon and/or colon cancer related protein of the invention in a eukaryotic system. *Pichia pastoris* is a  
5 methylotrophic yeast which can metabolize methanol as its sole carbon source. A main step in the methanol metabolism pathway is the oxidation of methanol to formaldehyde using O<sub>2</sub>. This reaction is catalyzed by the enzyme alcohol oxidase. In order to metabolize methanol as its sole carbon source, *Pichia pastoris* must generate high levels of alcohol oxidase due, in part, to the relatively low affinity of alcohol oxidase for O<sub>2</sub>. Consequently, in  
10 a growth medium depending on methanol as a main carbon source, the promoter region of one of the two alcohol oxidase genes (*AOX1*) is highly active. In the presence of methanol, alcohol oxidase produced from the *AOX1* gene comprises up to approximately 30% of the total soluble protein in *Pichia pastoris*. See, Ellis, S.B., et al., *Mol. Cell. Biol.* 5:1111-21 (1985); Koutz, P.J., et al., *Yeast* 5:167-77 (1989); Tschopp, J.F., et al., *Nucl. Acids Res.*  
15 15:3859-76 (1987). Thus, a heterologous coding sequence, such as, for example, a colon and/or colon cancer related polynucleotide of the present invention, under the transcriptional regulation of all or part of the *AOX1* regulatory sequence is expressed at exceptionally high levels in *Pichia* yeast grown in the presence of methanol.

In one example, the plasmid vector pPIC9K is used to express DNA encoding a colon  
20 and/or colon cancer related polypeptide of the invention, as set forth herein, in a *Pichea* yeast system essentially as described in "*Pichia* Protocols: Methods in Molecular Biology," D.R. Higgins and J. Cregg, eds. The Humana Press, Totowa, NJ, 1998. This expression vector allows expression and secretion of a colon and/or colon cancer related protein of the invention by virtue of the strong *AOX1* promoter linked to the *Pichia pastoris* alkaline  
25 phosphatase (PHO) secretory signal peptide (i.e., leader) located upstream of a multiple cloning site.

Many other yeast vectors could be used in place of pPIC9K, such as, pYES2, pYD1, pTEF1/Zeo, pYES2/GS, pPICZ, pGAPZ, pGAPZalpha, pPIC9, pPIC3.5, pHIL-D2, pHIL-S1, pPIC3.5K, and PAO815, as one skilled in the art would readily appreciate, as long as the  
30 proposed expression construct provides appropriately located signals for transcription, translation, secretion (if desired), and the like, including an in-frame AUG as required.

In another embodiment, high-level expression of a heterologous coding sequence, such as, for example, a colon and/or colon cancer related polynucleotide of the present invention, may be achieved by cloning the heterologous polynucleotide of the invention into an expression vector such as, for example, pGAPZ or pGAPZalpha, and  
5 growing the yeast culture in the absence of methanol.

In addition to encompassing host cells containing the vector constructs discussed herein, the invention also encompasses primary, secondary, and immortalized host cells of vertebrate origin, particularly mammalian origin, that have been engineered to delete or replace endogenous genetic material (e.g., coding sequence), and/or to include genetic  
10 material (e.g., heterologous polynucleotide sequences) that is operably associated with polynucleotides of the invention, and which activates, alters, and/or amplifies endogenous polynucleotides. For example, techniques known in the art may be used to operably associate heterologous control regions (e.g., promoter and/or enhancer) and endogenous polynucleotide sequences via homologous recombination (see, e.g., U.S. Patent No.  
15 5,641,670, issued June 24, 1997; International Publication No. WO 96/29411, published September 26, 1996; International Publication No. WO 94/12650, published August 4, 1994; Koller et al., Proc. Natl. Acad. Sci. USA 86:8932-8935 (1989); and Zijlstra et al., Nature 342:435-438 (1989), the disclosures of each of which are incorporated by reference in their entireties).

In addition, polypeptides of the invention can be chemically synthesized using techniques known in the art (e.g., see Creighton, 1983, Proteins: Structures and Molecular Principles, W.H. Freeman & Co., N.Y., and Hunkapiller et al., *Nature*, 310:105-111 (1984)). For example, a polypeptide corresponding to a fragment of a polypeptide can be synthesized by use of a peptide synthesizer. Furthermore, if desired, nonclassical amino acids or  
25 chemical amino acid analogs can be introduced as a substitution or addition into the polypeptide sequence. Non-classical amino acids include, but are not limited to, to the D-isomers of the common amino acids, 2,4-diaminobutyric acid,  $\alpha$ -amino isobutyric acid, 4-aminobutyric acid, Abu, 2-amino butyric acid,  $\gamma$ -Abu,  $\epsilon$ -Ahx, 6-amino hexanoic acid, Aib, 2-amino isobutyric acid, 3-amino propionic acid, ornithine, norleucine, norvaline,  
30 hydroxyproline, sarcosine, citrulline, homocitrulline, cysteic acid, t-butylglycine, t-butylalanine, phenylglycine, cyclohexylalanine,  $\beta$ -alanine, fluoro-amino acids, designer amino acids such as  $\beta$ -methyl amino acids, Ca-methyl amino acids, Na-methyl amino acids,

and amino acid analogs in general. Furthermore, the amino acid can be D (dextrorotary) or L (levorotary).

The invention encompasses polypeptides of the present invention which are differentially modified during or after translation, e.g., by glycosylation, acetylation, phosphorylation, amidation, derivatization by known protecting/blocking groups, proteolytic cleavage, linkage to an antibody molecule or other cellular ligand, etc. Any of numerous chemical modifications may be carried out by known techniques, including but not limited, to specific chemical cleavage by cyanogen bromide, trypsin, chymotrypsin, papain, V8 protease, NaBH<sub>4</sub>; acetylation, formylation, oxidation, reduction; metabolic synthesis in the presence of tunicamycin; etc.

Additional post-translational modifications encompassed by the invention include, for example, e.g., N-linked or O-linked carbohydrate chains, processing of N-terminal or C-terminal ends), attachment of chemical moieties to the amino acid backbone, chemical modifications of N-linked or O-linked carbohydrate chains, and addition or deletion of an N-terminal methionine residue as a result of procaryotic host cell expression. The polypeptides may also be modified with a detectable label, such as an enzymatic, fluorescent, isotopic or affinity label to allow for detection and isolation of the protein.

Also provided by the invention are chemically modified derivatives of the polypeptides of the invention which may provide additional advantages such as increased solubility, stability and circulating time of the polypeptide, or decreased immunogenicity (see U.S. Patent No. 4,179,337). The chemical moieties for derivitization may be selected from water soluble polymers such as polyethylene glycol, ethylene glycol/propylene glycol copolymers, carboxymethylcellulose, dextran, polyvinyl alcohol and the like. The polypeptides may be modified at random positions within the molecule, or at predetermined positions within the molecule and may include one, two, three or more attached chemical moieties.

The polymer may be of any molecular weight, and may be branched or unbranched. For polyethylene glycol, the preferred molecular weight is between about 1 kDa and about 100 kDa (the term "about" indicating that in preparations of polyethylene glycol, some molecules will weigh more, some less, than the stated molecular weight) for ease in handling and manufacturing. Other sizes may be used, depending on the desired therapeutic profile (e.g., the duration of sustained release desired, the effects, if any on biological activity, the

ease in handling, the degree or lack of antigenicity and other known effects of the polyethylene glycol to a therapeutic protein or analog). For example, the polyethylene glycol may have an average molecular weight of about 200, 500, 1000, 1500, 2000, 2500, 3000, 3500, 4000, 4500, 5000, 5500, 6000, 6500, 7000, 7500, 8000, 8500, 9000, 9500, 10,000, 10,500, 11,000, 11,500, 12,000, 12,500, 13,000, 13,500, 14,000, 14,500, 15,000, 15,500, 16,000, 16,500, 17,000, 17,500, 18,000, 18,500, 19,000, 19,500, 20,000, 25,000, 30,000, 35,000, 40,000, 50,000, 55,000, 60,000, 65,000, 70,000, 75,000, 80,000, 85,000, 90,000, 95,000, or 100,000 kDa.

As noted above, the polyethylene glycol may have a branched structure. Branched polyethylene glycols are described, for example, in U.S. Patent No. 5,643,575; Morpurgo *et al.*, *Appl. Biochem. Biotechnol.* 56:59-72 (1996); Vorobjev *et al.*, *Nucleosides Nucleotides* 18:2745-2750 (1999); and Caliceti *et al.*, *Bioconjug. Chem.* 10:638-646 (1999), the disclosures of each of which are incorporated herein by reference.

The polyethylene glycol molecules (or other chemical moieties) should be attached to the protein with consideration of effects on functional or antigenic domains of the protein. There are a number of attachment methods available to those skilled in the art, e.g., EP 0 401 384, herein incorporated by reference (coupling PEG to G-CSF), see also Malik *et al.*, *Exp. Hematol.* 20:1028-1035 (1992) (reporting pegylation of GM-CSF using tresyl chloride). For example, polyethylene glycol may be covalently bound through amino acid residues via a reactive group, such as, a free amino or carboxyl group. Reactive groups are those to which an activated polyethylene glycol molecule may be bound. The amino acid residues having a free amino group may include lysine residues and the N-terminal amino acid residues; those having a free carboxyl group may include aspartic acid residues glutamic acid residues and the C-terminal amino acid residue. Sulfhydryl groups may also be used as a reactive group for attaching the polyethylene glycol molecules. Preferred for therapeutic purposes is attachment at an amino group, such as attachment at the N-terminus or lysine group.

As suggested above, polyethylene glycol may be attached to proteins via linkage to any of a number of amino acid residues. For example, polyethylene glycol can be linked to a proteins via covalent bonds to lysine, histidine, aspartic acid, glutamic acid, or cysteine residues. One or more reaction chemistries may be employed to attach polyethylene glycol to specific amino acid residues (e.g., lysine, histidine, aspartic acid, glutamic acid, or

cysteine) of the protein or to more than one type of amino acid residue (e.g., lysine, histidine, aspartic acid, glutamic acid, cysteine and combinations thereof) of the protein.

One may specifically desire proteins chemically modified at the N-terminus. Using polyethylene glycol as an illustration of the present composition, one may select from a variety of polyethylene glycol molecules (by molecular weight, branching, etc.), the proportion of polyethylene glycol molecules to protein (polypeptide) molecules in the reaction mix, the type of pegylation reaction to be performed, and the method of obtaining the selected N-terminally pegylated protein. The method of obtaining the N-terminally pegylated preparation (i.e., separating this moiety from other monopegylated moieties if necessary) may be by purification of the N-terminally pegylated material from a population of pegylated protein molecules. Selective proteins chemically modified at the N-terminus modification may be accomplished by reductive alkylation which exploits differential reactivity of different types of primary amino groups (lysine versus the N-terminal) available for derivatization in a particular protein. Under the appropriate reaction conditions, substantially selective derivatization of the protein at the N-terminus with a carbonyl group containing polymer is achieved.

As indicated above, pegylation of the proteins of the invention may be accomplished by any number of means. For example, polyethylene glycol may be attached to the protein either directly or by an intervening linker. Linkerless systems for attaching polyethylene glycol to proteins are described in Delgado *et al.*, *Crit. Rev. Thera. Drug Carrier Sys.* 9:249-304 (1992); Francis *et al.*, *Intern. J. of Hematol.* 68:1-18 (1998); U.S. Patent No. 4,002,531; U.S. Patent No. 5,349,052; WO 95/06058; and WO 98/32466, the disclosures of each of which are incorporated herein by reference.

One system for attaching polyethylene glycol directly to amino acid residues of proteins without an intervening linker employs tresylated MPEG, which is produced by the modification of monmethoxy polyethylene glycol (MPEG) using tresylchloride ( $\text{ClSO}_2\text{CH}_2\text{CF}_3$ ). Upon reaction of protein with tresylated MPEG, polyethylene glycol is directly attached to amine groups of the protein. Thus, the invention includes protein-polyethylene glycol conjugates produced by reacting proteins of the invention with a polyethylene glycol molecule having a 2,2,2-trifluoroethane sulphonyl group.

Polyethylene glycol can also be attached to proteins using a number of different intervening linkers. For example, U.S. Patent No. 5,612,460, the entire disclosure of which is



incorporated herein by reference, discloses urethane linkers for connecting polyethylene glycol to proteins. Protein-polyethylene glycol conjugates wherein the polyethylene glycol is attached to the protein by a linker can also be produced by reaction of proteins with compounds such as MPEG-succinimidylsuccinate, MPEG activated with 1,1'-carbonyldiimidazole, MPEG-2,4,5-trichloropenylcarbonate, MPEG-p-nitrophenolcarbonate, and various MPEG-succinate derivatives. A number additional polyethylene glycol derivatives and reaction chemistries for attaching polyethylene glycol to proteins are described in WO 98/32466, the entire disclosure of which is incorporated herein by reference. Pegylated protein products produced using the reaction chemistries set out herein are included within the scope of the invention.

The number of polyethylene glycol moieties attached to each protein of the invention (*i.e.*, the degree of substitution) may also vary. For example, the pegylated proteins of the invention may be linked, on average, to 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 15, 17, 20, or more polyethylene glycol molecules. Similarly, the average degree of substitution within ranges such as 1-3, 2-4, 3-5, 4-6, 5-7, 6-8, 7-9, 8-10, 9-11, 10-12, 11-13, 12-14, 13-15, 14-16, 15-17, 16-18, 17-19, or 18-20 polyethylene glycol moieties per protein molecule. Methods for determining the degree of substitution are discussed, for example, in Delgado *et al.*, *Crit. Rev. Thera. Drug Carrier Sys.* 9:249-304 (1992).

The polypeptides of the invention may be in monomers or multimers (*i.e.*, dimers, trimers, tetramers and higher multimers). Accordingly, the present invention relates to monomers and multimers of the polypeptides of the invention, their preparation, and compositions (preferably, Therapeutics) containing them. In specific embodiments, the polypeptides of the invention are monomers, dimers, trimers or tetramers. In additional embodiments, the multimers of the invention are at least dimers, at least trimers, or at least tetramers.

Multimers encompassed by the invention may be homomers or heteromers. As used herein, the term homomer, refers to a multimer containing only polypeptides corresponding to the amino acid sequence of SEQ ID NO:Y or encoded by the cDNA contained in the deposited clone (including fragments, variants, splice variants, and fusion proteins, corresponding to these as described herein). These homomers may contain polypeptides having identical or different amino acid sequences. In a specific embodiment, a homomer of the invention is a multimer containing only polypeptides having an identical amino acid

sequence. In another specific embodiment, a homomer of the invention is a multimer containing polypeptides having different amino acid sequences. In specific embodiments, the multimer of the invention is a homodimer (e.g., containing polypeptides having identical or different amino acid sequences) or a homotrimer (e.g., containing polypeptides having identical and/or different amino acid sequences). In additional embodiments, the homomeric multimer of the invention is at least a homodimer, at least a homotrimer, or at least a homotetramer.

As used herein, the term heteromer refers to a multimer containing one or more heterologous polypeptides (i.e., polypeptides of different proteins) in addition to the polypeptides of the invention. In a specific embodiment, the multimer of the invention is a heterodimer, a heterotrimer, or a heterotetramer. In additional embodiments, the heteromeric multimer of the invention is at least a heterodimer, at least a heterotrimer, or at least a heterotetramer.

Multimers of the invention may be the result of hydrophobic, hydrophilic, ionic and/or covalent associations and/or may be indirectly linked, by for example, liposome formation. Thus, in one embodiment, multimers of the invention, such as, for example, homodimers or homotrimers, are formed when polypeptides of the invention contact one another in solution. In another embodiment, heteromultimers of the invention, such as, for example, heterotrimers or heterotetramers, are formed when polypeptides of the invention contact antibodies to the polypeptides of the invention (including antibodies to the heterologous polypeptide sequence in a fusion protein of the invention) in solution. In other embodiments, multimers of the invention are formed by covalent associations with and/or between the polypeptides of the invention. Such covalent associations may involve one or more amino acid residues contained in the polypeptide sequence (e.g., that recited in SEQ ID NO:Y, or contained in the polypeptide encoded by the clone). In one instance, the covalent associations are cross-linking between cysteine residues located within the polypeptide sequences which interact in the native (i.e., naturally occurring) polypeptide. In another instance, the covalent associations are the consequence of chemical or recombinant manipulation. Alternatively, such covalent associations may involve one or more amino acid residues contained in the heterologous polypeptide sequence in a fusion protein. In one example, covalent associations are between the heterologous sequence contained in a fusion protein of the invention (see, e.g., US Patent Number 5,478,925). In a specific example, the

covalent associations are between the heterologous sequence contained in a Fc fusion protein of the invention (as described herein). In another specific example, covalent associations of fusion proteins of the invention are between heterologous polypeptide sequence from another protein that is capable of forming covalently associated multimers, such as for example, osteopontin (see, e.g., International Publication NO: WO 98/49305, the contents of which are herein incorporated by reference in its entirety). In another embodiment, two or more polypeptides of the invention are joined through peptide linkers. Examples include those peptide linkers described in U.S. Pat. No. 5,073,627 (hereby incorporated by reference). Proteins comprising multiple polypeptides of the invention separated by peptide linkers may be produced using conventional recombinant DNA technology.

Another method for preparing multimer polypeptides of the invention involves use of polypeptides of the invention fused to a leucine zipper or isoleucine zipper polypeptide sequence. Leucine zipper and isoleucine zipper domains are polypeptides that promote multimerization of the proteins in which they are found. Leucine zippers were originally identified in several DNA-binding proteins (Landschulz et al., Science 240:1759, (1988)), and have since been found in a variety of different proteins. Among the known leucine zippers are naturally occurring peptides and derivatives thereof that dimerize or trimerize. Examples of leucine zipper domains suitable for producing soluble multimeric proteins of the invention are those described in PCT application WO 94/10308, hereby incorporated by reference. Recombinant fusion proteins comprising a polypeptide of the invention fused to a polypeptide sequence that dimerizes or trimerizes in solution are expressed in suitable host cells, and the resulting soluble multimeric fusion protein is recovered from the culture supernatant using techniques known in the art.

Trimeric polypeptides of the invention may offer the advantage of enhanced biological activity. Preferred leucine zipper moieties and isoleucine moieties are those that preferentially form trimers. One example is a leucine zipper derived from lung surfactant protein D (SPD), as described in Hoppe et al. (FEBS Letters 344:191, (1994)) and in U.S. patent application Ser. No. 08/446,922, hereby incorporated by reference. Other peptides derived from naturally occurring trimeric proteins may be employed in preparing trimeric polypeptides of the invention.

In another example, proteins of the invention are associated by interactions between Flag® polypeptide sequence contained in fusion proteins of the invention containing Flag® polypeptide sequence. In a further embodiment, associations proteins of the invention are associated by interactions between heterologous polypeptide sequence contained in Flag® fusion proteins of the invention and anti-Flag® antibody.

The multimers of the invention may be generated using chemical techniques known in the art. For example, polypeptides desired to be contained in the multimers of the invention may be chemically cross-linked using linker molecules and linker molecule length optimization techniques known in the art (see, e.g., US Patent Number 5,478,925, which is herein incorporated by reference in its entirety). Additionally, multimers of the invention may be generated using techniques known in the art to form one or more inter-molecule cross-links between the cysteine residues located within the sequence of the polypeptides desired to be contained in the multimer (see, e.g., US Patent Number 5,478,925, which is herein incorporated by reference in its entirety). Further, polypeptides of the invention may be routinely modified by the addition of cysteine or biotin to the C-terminus or N-terminus of the polypeptide and techniques known in the art may be applied to generate multimers containing one or more of these modified polypeptides (see, e.g., US Patent Number 5,478,925, which is herein incorporated by reference in its entirety). Additionally, techniques known in the art may be applied to generate liposomes containing the polypeptide components desired to be contained in the multimer of the invention (see, e.g., US Patent Number 5,478,925, which is herein incorporated by reference in its entirety).

Alternatively, multimers of the invention may be generated using genetic engineering techniques known in the art. In one embodiment, polypeptides contained in multimers of the invention are produced recombinantly using fusion protein technology described herein or otherwise known in the art (see, e.g., US Patent Number 5,478,925, which is herein incorporated by reference in its entirety). In a specific embodiment, polynucleotides coding for a homodimer of the invention are generated by ligating a polynucleotide sequence encoding a polypeptide of the invention to a sequence encoding a linker polypeptide and then further to a synthetic polynucleotide encoding the translated product of the polypeptide in the reverse orientation from the original C-terminus to the N-terminus (lacking the leader sequence) (see, e.g., US Patent Number 5,478,925, which is herein incorporated by reference in its entirety). In another embodiment, recombinant techniques described herein or

otherwise known in the art are applied to generate recombinant polypeptides of the invention which contain a transmembrane domain (or hydrophobic or signal peptide) and which can be incorporated by membrane reconstitution techniques into liposomes (see, e.g., US Patent Number 5,478,925, which is herein incorporated by reference in its entirety).

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### **Uses of the Polynucleotides**

Each of the polynucleotides identified herein can be used in numerous ways as reagents. The following description should be considered exemplary and utilizes known techniques.

10 The colon and/or colon cancer related polynucleotides of the present invention are useful for chromosome identification. There exists an ongoing need to identify new chromosome markers, since few chromosome marking reagents, based on actual sequence data (repeat polymorphisms), are presently available. Each polynucleotide of the present invention can be used as a chromosome marker.

15 Briefly, sequences can be mapped to chromosomes by preparing PCR primers (preferably 15-25 bp) from the sequences shown in SEQ ID NO:X. Primers can be selected using computer analysis so that primers do not span more than one predicted exon in the genomic DNA. These primers are then used for PCR screening of somatic cell hybrids containing individual human chromosomes. Only those hybrids containing the human gene  
20 corresponding to the SEQ ID NO:X will yield an amplified fragment.

Similarly, somatic hybrids provide a rapid method of PCR mapping the polynucleotides to particular chromosomes. Three or more clones can be assigned per day using a single thermal cycler. Moreover, sublocalization of the polynucleotides can be achieved with panels of specific chromosome fragments. Other gene mapping strategies that  
25 can be used include in situ hybridization, prescreening with labeled flow-sorted chromosomes, and preselection by hybridization to construct chromosome specific-cDNA libraries, and computer mapping techniques (See, e.g., Shuler, Trends Biotechnol 16:456-459 (1998) which is hereby incorporated by reference in its entirety).

Precise chromosomal location of the polynucleotides can also be achieved using  
30 fluorescence in situ hybridization (FISH) of a metaphase chromosomal spread. This technique uses polynucleotides as short as 500 or 600 bases; however, polynucleotides 2,000-

4,000 bp are preferred. For a review of this technique, see Verma et al., "Human Chromosomes: a Manual of Basic Techniques," Pergamon Press, New York (1988).

For chromosome mapping, the polynucleotides can be used individually (to mark a single chromosome or a single site on that chromosome) or in panels (for marking multiple sites and/or multiple chromosomes). Preferred polynucleotides correspond to the noncoding regions of the cDNAs because the coding sequences are more likely conserved within gene families, thus increasing the chance of cross hybridization during chromosomal mapping.

Thus, the present invention also provides a method for chromosomal localization which involves (a) preparing PCR primers from colon and/or colon cancer related polynucleotide sequences in Table 1 and (b) screening somatic cell hybrids containing individual chromosomes.

The polynucleotides of the present invention would likewise be useful for radiation hybrid mapping, HAPPY mapping, and long range restriction mapping. For a review of these techniques and others known in the art, see, e.g., Dear, "Genome Mapping: A Practical Approach," IRL Press at Oxford University Press, London (1997); Aydin, J. Mol. Med. 77:691-694 (1999); Hacia et al., Mol. Psychiatry 3:483-492 (1998); Herrick et al., Chromosome Res. 7:409-423 (1999); Hamilton et al., Methods Cell Biol. 62:265-280 (2000); and/or Ott, J. Hered. 90:68-70 (1999) each of which is hereby incorporated by reference in its entirety.

Once a polynucleotide has been mapped to a precise chromosomal location, the physical position of the polynucleotide can be used in linkage analysis. Linkage analysis establishes coinheritance between a chromosomal location and presentation of a particular disease. (Disease mapping data are found, for example, in V. McKusick, Mendelian Inheritance in Man (available on line through Johns Hopkins University Welch Medical Library) .) Assuming 1 megabase mapping resolution and one gene per 20 kb, a cDNA precisely localized to a chromosomal region associated with the disease could be one of 50-500 potential causative genes.

Thus, once coinheritance is established, differences in the colon and/or colon cancer related polynucleotide and the corresponding gene between affected and unaffected individuals can be examined. First, visible structural alterations in the chromosomes, such as deletions or translocations, are examined in chromosome spreads or by PCR. If no structural alterations exist, the presence of point mutations are ascertained. Mutations observed in

1950

some or all affected individuals, but not in normal individuals, indicates that the mutation may cause the disease. However, complete sequencing of the polypeptide and the corresponding gene from several normal individuals is required to distinguish the mutation from a polymorphism. If a new polymorphism is identified, this polymorphic polypeptide  
5 can be used for further linkage analysis.

Thus, the invention provides a method of detecting increased or decreased expression levels of the colon and/or colon cancer related polynucleotides in affected individuals as compared to unaffected individuals using polynucleotides of the present invention and techniques known in the art, including but not limited to the method described in Example  
10 11. Any of these alterations (altered expression, chromosomal rearrangement, or mutation) can be used as a diagnostic or prognostic marker.

Thus, the invention also provides a diagnostic method useful during diagnosis of a tissue related disorder, including cancers, involving measuring the expression level of colon and/or colon cancer related polynucleotides in colon or colon cancer tissues or other cells or  
15 body fluid from an individual and comparing the measured gene expression level with a standard colon and/or colon cancer related polynucleotide expression level, whereby an increase or decrease in the gene expression level compared to the standard is indicative of a colon related disorder, including colon cancer, or a specific tissue related disorder.

In still another embodiment, the invention includes a kit for analyzing samples for the  
20 presence of proliferative and/or cancerous polynucleotides derived from a test subject. In a general embodiment, the kit includes at least one polynucleotide probe containing a nucleotide sequence that will specifically hybridize with a colon and/or colon cancer related polynucleotide and a suitable container. In a specific embodiment, the kit includes two polynucleotide probes defining an internal region of the colon and/or colon cancer related  
25 polynucleotide, where each probe has one strand containing a 31'mer-end internal to the region. In a further embodiment, the probes may be useful as primers for polymerase chain reaction amplification.

Where a diagnosis of a specific tissue related disorder, including, for example, diagnosis of a tumor, has already been made according to conventional methods, the present  
30 invention is useful as a prognostic indicator, whereby patients exhibiting enhanced or depressed colon and/or colon cancer related polynucleotide expression will experience a

worse clinical outcome relative to patients expressing the gene at a level nearer the standard level.

By "measuring the expression level of colon and/or colon cancer related polynucleotides" is intended qualitatively or quantitatively measuring or estimating the level  
5 of the colon and/or colon cancer related polypeptide or the level of the mRNA encoding the colon and/or colon cancer related polypeptide in a first biological sample either directly (e.g., by determining or estimating absolute protein level or mRNA level) or relatively (e.g., by comparing to the colon and/or colon cancer related polypeptide level or mRNA level in a second biological sample). Preferably, the colon and/or colon cancer related polypeptide  
10 level or mRNA level in the first biological sample is measured or estimated and compared to a standard colon and/or colon cancer related polypeptide level or mRNA level, the standard being taken from a second biological sample obtained from an individual not having the specific tissue related disorder or being determined by averaging levels from a population of individuals not having a specific tissue related disorder. As will be appreciated in the art,  
15 once a standard colon and/or colon cancer related polypeptide level or mRNA level is known, it can be used repeatedly as a standard for comparison.

By "biological sample" is intended any biological sample obtained from an individual, body fluid, cell line, tissue culture, or other source which contains colon and/or colon cancer related polypeptide or mRNA. As indicated, biological samples include body  
20 fluids (such as sera, plasma, urine, bile, vaginal pool, semen, lymph, synovial fluid and spinal fluid) which contain the colon and/or colon cancer related polypeptide, and tissue sources found to express the colon and/or colon cancer related polypeptide including colon and/or colon cancer. Methods for obtaining tissue biopsies and body fluids from mammals are well known in the art. Where the biological sample is to include mRNA, a tissue biopsy is the  
25 preferred source.

The method(s) provided above may preferably be applied in a diagnostic method and/or kits in which colon and/or colon cancer related polynucleotides and/or polypeptides are attached to a solid support. In one exemplary method, the support may be a "gene chip" or a "biological chip" as described in US Patents 5,837,832, 5,874,219, and 5,856,174.  
30 Further, such a gene chip with colon and/or colon cancer related polynucleotides attached may be used to identify polymorphisms between the colon and/or colon cancer related polynucleotide sequences, with polynucleotides isolated from a test subject. The knowledge



of such polymorphisms (i.e. their location, as well as, their existence) would be beneficial in identifying disease loci for many disorders, such as for example, in reproductive disorders, neural disorders, immune system disorders, muscular disorders, gastrointestinal disorders, pulmonary disorders, cardiovascular disorders, renal disorders, proliferative disorders, and/or  
5 cancerous diseases and conditions. Such a method is described in US Patents 5,858,659 and 5,856,104. The US Patents referenced supra are hereby incorporated by reference in their entirety herein.

The present invention encompasses colon and/or colon cancer related polynucleotides that are chemically synthesized, or reproduced as peptide nucleic acids (PNA), or according  
10 to other methods known in the art. The use of PNAs would serve as the preferred form if the colon and/or colon cancer related polynucleotides are incorporated onto a solid support, or gene chip. For the purposes of the present invention, a peptide nucleic acid (PNA) is a polyamide type of DNA analog and the monomeric units for adenine, guanine, thymine and cytosine are available commercially (Perceptive Biosystems). Certain components of DNA,  
15 such as phosphorus, phosphorus oxides, or deoxyribose derivatives, are not present in PNAs. As disclosed by P. E. Nielsen, M. Egholm, R. H. Berg and O. Buchardt, Science 254, 1497 (1991); and M. Egholm, O. Buchardt, L. Christensen, C. Behrens, S. M. Freier, D. A. Driver, R. H. Berg, S. K. Kim, B. Norden, and P. E. Nielsen, Nature 365, 666 (1993), PNAs bind specifically and tightly to complementary DNA strands and are not degraded by nucleases. In  
20 fact, PNA binds more strongly to DNA than DNA itself does. This is probably because there is no electrostatic repulsion between the two strands, and also the polyamide backbone is more flexible. Because of this, PNA/DNA duplexes bind under a wider range of stringency conditions than DNA/DNA duplexes, making it easier to perform multiplex hybridization. Smaller probes can be used than with DNA due to the strong binding. In addition, it is more  
25 likely that single base mismatches can be determined with PNA/DNA hybridization because a single mismatch in a PNA/DNA 15-mer lowers the melting point ( $T_{sub.m}$ ) by 8°-20° C, vs. 4°-16° C for the DNA/DNA 15-mer duplex. Also, the absence of charge groups in PNA means that hybridization can be done at low ionic strengths and reduce possible interference by salt during the analysis.

30 The present invention have uses which include, but are not limited to, detecting cancer in mammals. In particular the invention is useful during diagnosis of pathological cell proliferative neoplasias which include, but are not limited to: acute myelogenous leukemias

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including acute monocytic leukemia, acute myeloblastic leukemia, acute promyelocytic leukemia, acute myelomonocytic leukemia, acute erythroleukemia, acute megakaryocytic leukemia, and acute undifferentiated leukemia, etc.; and chronic myelogenous leukemias including chronic myelomonocytic leukemia, chronic granulocytic leukemia, etc. Preferred mammals include monkeys, apes, cats, dogs, cows, pigs, horses, rabbits and humans. Particularly preferred are humans.

Pathological cell proliferative disorders are often associated with inappropriate activation of proto-oncogenes. (Germann, E. P. et al., "The Etiology of Acute Leukemia: Molecular Genetics and Viral Oncology," in Neoplastic Diseases of the Blood, Vol 1., Wiernik, P. H. et al. eds., 161-182 (1985)). Neoplasias are now believed to result from the qualitative alteration of a normal cellular gene product, or from the quantitative modification of gene expression by insertion into the chromosome of a viral sequence, by chromosomal translocation of a gene to a more actively transcribed region, or by some other mechanism. (Germann et al., supra) It is likely that mutated or altered expression of specific genes is involved in the pathogenesis of some leukemias, among other tissues and cell types. (Germann et al., supra) Indeed, the human counterparts of the oncogenes involved in some animal neoplasias have been amplified or translocated in some cases of human leukemia and carcinoma. (Germann et al., supra)

For example, c-myc expression is highly amplified in the non-lymphocytic leukemia cell line HL-60. When HL-60 cells are chemically induced to stop proliferation, the level of c-myc is found to be downregulated. (International Publication Number WO 91/15580) However, it has been shown that exposure of HL-60 cells to a DNA construct that is complementary to the 5' end of c-myc or c-myb blocks translation of the corresponding mRNAs which downregulates expression of the c-myc or c-myb proteins and causes arrest of cell proliferation and differentiation of the treated cells. (International Publication Number WO 91/15580; Wickstrom et al., Proc. Natl. Acad. Sci. 85:1028 (1988); Anfossi et al., Proc. Natl. Acad. Sci. 86:3379 (1989)). However, the skilled artisan would appreciate the present invention's usefulness would not be limited to treatment of proliferative disorders of hematopoietic cells and tissues, in light of the numerous cells and cell types of varying origins which are known to exhibit proliferative phenotypes.

In addition to the foregoing, a colon and/or colon cancer related polynucleotide can be used to control gene expression through triple helix formation or through antisense DNA or

RNA. Antisense techniques are discussed, for example, in Okano, J. *Neurochem.* 56: 560 (1991); "Oligodeoxynucleotides as Antisense Inhibitors of Gene Expression, CRC Press, Boca Raton, FL (1988). Triple helix formation is discussed in, for instance Lee et al., *Nucleic Acids Research* 6: 3073 (1979); Cooney et al., *Science* 241: 456 (1988); and Dervan et al.,  
5 *Science* 251: 1360 (1991). Both methods rely on binding of the polynucleotide to a complementary DNA or RNA. For these techniques, preferred polynucleotides are usually oligonucleotides 20 to 40 bases in length and complementary to either the region of the gene involved in transcription (triple helix - see Lee et al., *Nucl. Acids Res.* 6:3073 (1979); Cooney et al., *Science* 241:456 (1988); and Dervan et al., *Science* 251:1360 (1991) ) or to the  
10 mRNA itself (antisense - Okano, J. *Neurochem.* 56:560 (1991); Oligodeoxy-nucleotides as Antisense Inhibitors of Gene Expression, CRC Press, Boca Raton, FL (1988).) Triple helix formation optimally results in a shut-off of RNA transcription from DNA, while antisense RNA hybridization blocks translation of an mRNA molecule into polypeptide. The oligonucleotide described above can also be delivered to cells such that the antisense RNA or  
15 DNA may be expressed in vivo to inhibit production of colon and/or colon cancer related antigens. Both techniques are effective in model systems, and the information disclosed herein can be used to design antisense or triple helix polynucleotides in an effort to treat disease, and in particular, for the treatment of proliferative diseases and/or conditions.

Polynucleotides of the present invention are also useful in gene therapy. One goal of  
20 gene therapy is to insert a normal gene into an organism having a defective gene, in an effort to correct the genetic defect. The polynucleotides disclosed in the present invention offer a means of targeting such genetic defects in a highly accurate manner. Another goal is to insert a new gene that was not present in the host genome, thereby producing a new trait in the host cell.

25 The polynucleotides are also useful for identifying individuals from minute biological samples. The United States military, for example, is considering the use of restriction fragment length polymorphism (RFLP) for identification of its personnel. In this technique, an individual's genomic DNA is digested with one or more restriction enzymes, and probed on a Southern blot to yield unique bands for identifying personnel. This method does not  
30 suffer from the current limitations of "Dog Tags" which can be lost, switched, or stolen, making positive identification difficult. The polynucleotides of the present invention can be used as additional DNA markers for RFLP.

The polynucleotides of the present invention can also be used as an alternative to RFLP, by determining the actual base-by-base DNA sequence of selected portions of an individual's genome. These sequences can be used to prepare PCR primers for amplifying and isolating such selected DNA, which can then be sequenced. Using this technique, individuals can be identified because each individual will have a unique set of DNA sequences. Once an unique ID database is established for an individual, positive identification of that individual, living or dead, can be made from extremely small tissue samples.

Forensic biology also benefits from using DNA-based identification techniques as disclosed herein. DNA sequences taken from very small biological samples such as tissues, e.g., hair or skin, or body fluids, e.g., blood, saliva, semen, synovial fluid, amniotic fluid, breast milk, lymph, pulmonary sputum or surfactant, urine, fecal matter, etc., can be amplified using PCR. In one prior art technique, gene sequences amplified from polymorphic loci, such as DQa class II HLA gene, are used in forensic biology to identify individuals. (Erlich, H., PCR Technology, Freeman and Co. (1992).) Once these specific polymorphic loci are amplified, they are digested with one or more restriction enzymes, yielding an identifying set of bands on a Southern blot probed with DNA corresponding to the DQa class II HLA gene. Similarly, polynucleotides of the present invention can be used as polymorphic markers for forensic purposes.

There is also a need for reagents capable of identifying the source of a particular tissue. Such need arises, for example, in forensics when presented with tissue of unknown origin. Appropriate reagents can comprise, for example, DNA probes or primers specific to tissues, including but not limited to those shown in Table 3 prepared from the sequences of the present invention. Panels of such reagents can identify tissue by species and/or by organ type. In a similar fashion, these reagents can be used to screen tissue cultures for contamination.

The polynucleotides of the present invention are also useful as hybridization probes for differential identification of the tissue(s) or cell type(s) present in a biological sample. Similarly, polypeptides and antibodies directed to polypeptides of the present invention are useful to provide immunological probes for differential identification of the tissue(s) (e.g., immunohistochemistry assays) or cell type(s) (e.g., immunocytochemistry assays). In addition, for a number of disorders of the above tissues or cells, significantly higher or lower

levels of gene expression of the polynucleotides/polypeptides of the present invention may be detected in certain tissues (e.g., tissues expressing polypeptides and/or polynucleotides of the present invention and/or cancerous and/or wounded tissues) or bodily fluids (e.g., vaginal pool, lymph, serum, plasma, urine, synovial fluid or spinal fluid) taken  
5 from an individual having such a disorder, relative to a "standard" gene expression level, i.e., the expression level in healthy tissue from an individual not having the disorder.

Thus, the invention provides a diagnostic method of a disorder, which involves: (a) assaying gene expression level in cells or body fluid of an individual; (b) comparing the gene expression level with a standard gene expression level, whereby an increase or decrease in  
10 the assayed gene expression level compared to the standard expression level is indicative of disorder.

In the very least, the polynucleotides of the present invention can be used as molecular weight markers on Southern gels, as diagnostic probes for the presence of a specific mRNA in a particular cell type, as a probe to "subtract-out" known sequences in the  
15 process of discovering novel polynucleotides, for selecting and making oligomers for attachment to a "gene chip" or other support, to raise anti-DNA antibodies using DNA immunization techniques, and as an antigen to elicit an immune response.

### **Uses of the Polypeptides**

20 Each of the polypeptides identified herein can be used in numerous ways. The following description should be considered exemplary and utilizes known techniques.

Polypeptides and antibodies directed to polypeptides of the present invention are useful to provide immunological probes for differential identification of the tissue(s) (e.g., immunohistochemistry assays such as, for example, ABC immunoperoxidase (Hsu et al., J.  
25 Histochem. Cytochem. 29:577-580 (1981)) or cell type(s) (e.g., immunocytochemistry assays).

Antibodies can be used to assay levels of polypeptides encoded by polynucleotides of the invention in a biological sample using classical immunohistological methods known to those of skill in the art (e.g., see Jalkanen, et al., J. Cell. Biol. 101:976-985 (1985); Jalkanen,  
30 et al., J. Cell. Biol. 105:3087-3096 (1987)). Other antibody-based methods useful for detecting protein gene expression include immunoassays, such as the enzyme linked immunosorbent assay (ELISA) and the radioimmunoassay (RIA). Suitable antibody assay

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labels are known in the art and include enzyme labels, such as, glucose oxidase; radioisotopes, such as iodine ( $^{131}\text{I}$ ,  $^{125}\text{I}$ ,  $^{123}\text{I}$ ,  $^{121}\text{I}$ ), carbon ( $^{14}\text{C}$ ), sulfur ( $^{35}\text{S}$ ), tritium ( $^3\text{H}$ ), indium ( $^{115\text{m}}\text{In}$ ,  $^{113\text{m}}\text{In}$ ,  $^{112}\text{In}$ ,  $^{111}\text{In}$ ), and technetium ( $^{99}\text{Tc}$ ,  $^{99\text{m}}\text{Tc}$ ), thallium ( $^{201}\text{Tl}$ ), gallium ( $^{68}\text{Ga}$ ,  $^{67}\text{Ga}$ ), palladium ( $^{103}\text{Pd}$ ), molybdenum ( $^{99}\text{Mo}$ ), xenon ( $^{133}\text{Xe}$ ), fluorine ( $^{18}\text{F}$ ),  $^{153}\text{Sm}$ ,  
5  $^{177}\text{Lu}$ ,  $^{159}\text{Gd}$ ,  $^{149}\text{Pm}$ ,  $^{140}\text{La}$ ,  $^{175}\text{Yb}$ ,  $^{166}\text{Ho}$ ,  $^{90}\text{Y}$ ,  $^{47}\text{Sc}$ ,  $^{186}\text{Re}$ ,  $^{188}\text{Re}$ ,  $^{142}\text{Pr}$ ,  $^{105}\text{Rh}$ ,  $^{97}\text{Ru}$ ; luminescent labels, such as luminol; and fluorescent labels, such as fluorescein and rhodamine, and biotin.

In addition to assaying colon and/or colon cancer related polypeptide levels in a biological sample, proteins can also be detected in vivo by imaging. Antibody labels or  
10 markers for in vivo imaging of protein include those detectable by X-radiography, NMR or ESR. For X-radiography, suitable labels include radioisotopes such as barium or cesium, which emit detectable radiation but are not overtly harmful to the subject. Suitable markers for NMR and ESR include those with a detectable characteristic spin, such as deuterium, which may be incorporated into the antibody by labeling of nutrients for the relevant  
15 hybridoma.

A protein-specific antibody or antibody fragment which has been labeled with an appropriate detectable imaging moiety, such as a radioisotope (for example,  $^{131}\text{I}$ ,  $^{112}\text{In}$ ,  $^{99\text{m}}\text{Tc}$ , ( $^{131}\text{I}$ ,  $^{125}\text{I}$ ,  $^{123}\text{I}$ ,  $^{121}\text{I}$ ), carbon ( $^{14}\text{C}$ ), sulfur ( $^{35}\text{S}$ ), tritium ( $^3\text{H}$ ), indium ( $^{115\text{m}}\text{In}$ ,  $^{113\text{m}}\text{In}$ ,  $^{112}\text{In}$ ,  $^{111}\text{In}$ ), and technetium ( $^{99}\text{Tc}$ ,  $^{99\text{m}}\text{Tc}$ ), thallium ( $^{201}\text{Tl}$ ), gallium ( $^{68}\text{Ga}$ ,  $^{67}\text{Ga}$ ), palladium ( $^{103}\text{Pd}$ ),  
20 molybdenum ( $^{99}\text{Mo}$ ), xenon ( $^{133}\text{Xe}$ ), fluorine ( $^{18}\text{F}$ ,  $^{153}\text{Sm}$ ,  $^{177}\text{Lu}$ ,  $^{159}\text{Gd}$ ,  $^{149}\text{Pm}$ ,  $^{140}\text{La}$ ,  $^{175}\text{Yb}$ ,  $^{166}\text{Ho}$ ,  $^{90}\text{Y}$ ,  $^{47}\text{Sc}$ ,  $^{186}\text{Re}$ ,  $^{188}\text{Re}$ ,  $^{142}\text{Pr}$ ,  $^{105}\text{Rh}$ ,  $^{97}\text{Ru}$ ), a radio-opaque substance, or a material detectable by nuclear magnetic resonance, is introduced (for example, parenterally, subcutaneously or intraperitoneally) into the mammal to be examined for a digestive system disorder, including but not limited to disorders or diseases of the colon such as colon cancer.  
25 It will be understood in the art that the size of the subject and the imaging system used will determine the quantity of imaging moiety needed to produce diagnostic images. In the case of a radioisotope moiety, for a human subject, the quantity of radioactivity injected will normally range from about 5 to 20 millicuries of  $^{99\text{m}}\text{Tc}$ . The labeled antibody or antibody fragment will then preferentially accumulate at the location of cells which express the  
30 polypeptide encoded by a polynucleotide of the invention. *In vivo* tumor imaging is described in S.W. Burchiel et al., "Immunopharmacokinetics of Radiolabeled Antibodies and

Their Fragments" (Chapter 13 in *Tumor Imaging: The Radiochemical Detection of Cancer*, S.W. Burchiel and B. A. Rhodes, eds., Masson Publishing Inc. (1982)).

In one embodiment, the invention provides a method for the specific delivery of compositions of the invention to cells by administering polypeptides of the invention (e.g., polypeptides encoded by colon and/or colon cancer related polynucleotides of the invention and/or antibodies) that are associated with heterologous polypeptides or nucleic acids. In one example, the invention provides a method for delivering a therapeutic protein into the targeted cell. In another example, the invention provides a method for delivering a single stranded nucleic acid (e.g., antisense or ribozymes) or double stranded nucleic acid (e.g., DNA that can integrate into the cell's genome or replicate episomally and that can be transcribed) into the targeted cell.

In another embodiment, the invention provides a method for the specific destruction of cells (e.g., the destruction of tumor cells) by administering polypeptides of the invention in association with toxins or cytotoxic prodrugs.

By "toxin" is meant one or more compounds that bind and activate endogenous cytotoxic effector systems, radioisotopes, holotoxins, modified toxins, catalytic subunits of toxins, or any molecules or enzymes not normally present in or on the surface of a cell that under defined conditions cause the cell's death. Toxins that may be used according to the methods of the invention include, but are not limited to, radioisotopes known in the art, compounds such as, for example, antibodies (or complement fixing containing portions thereof) that bind an inherent or induced endogenous cytotoxic effector system, thymidine kinase, endonuclease, RNase, alpha toxin, ricin, abrin, *Pseudomonas* exotoxin A, diphtheria toxin, saporin, momordin, gelonin, pokeweed antiviral protein, alpha-sarcin and cholera toxin. "Toxin" also includes a cytostatic or cytocidal agent, a therapeutic agent or a radioactive metal ion, e.g., alpha-emitters such as, for example,  $^{213}\text{Bi}$ , or other radioisotopes such as, for example,  $^{103}\text{Pd}$ ,  $^{133}\text{Xe}$ ,  $^{131}\text{I}$ ,  $^{68}\text{Ge}$ ,  $^{57}\text{Co}$ ,  $^{65}\text{Zn}$ ,  $^{85}\text{Sr}$ ,  $^{32}\text{P}$ ,  $^{35}\text{S}$ ,  $^{90}\text{Y}$ ,  $^{153}\text{Sm}$ ,  $^{153}\text{Gd}$ ,  $^{169}\text{Yb}$ ,  $^{51}\text{Cr}$ ,  $^{54}\text{Mn}$ ,  $^{75}\text{Se}$ ,  $^{113}\text{Sn}$ ,  $^{90}\text{Yttrium}$ ,  $^{117}\text{Tin}$ ,  $^{186}\text{Rhenium}$ ,  $^{166}\text{Holmium}$ , and  $^{188}\text{Rhenium}$ ; luminescent labels, such as luminol; and fluorescent labels, such as fluorescein and rhodamine, and biotin.

Techniques known in the art may be applied to label polypeptides of the invention (including antibodies). Such techniques include, but are not limited to, the use of bifunctional conjugating agents (see e.g., U.S. Patent Nos. 5,756,065; 5,714,631; 5,696,239;

5,652,361; 5,505,931; 5,489,425; 5,435,990; 5,428,139; 5,342,604; 5,274,119; 4,994,560; and 5,808,003; the contents of each of which are hereby incorporated by reference in its entirety).

Thus, the invention provides a diagnostic method of a disorder, which involves (a)  
5 assaying the expression level of a colon and/or colon cancer related polypeptide of the present invention in cells or body fluid of an individual, or more preferably, assaying the expression level of a colon and/or colon cancer related polypeptide of the present invention in colon and/or colon cancer tissues or associated bodily fluid of an individual; and (b)  
10 comparing the assayed polypeptide expression level with a standard polypeptide expression level, whereby an increase or decrease in the assayed polypeptide expression level compared to the standard expression level is indicative of a disorder. With respect to cancer, the presence of a relatively high amount of transcript in biopsied tissue from an individual may indicate a predisposition for the development of the disease, or may provide a means for detecting the disease prior to the appearance of actual clinical symptoms. A more definitive  
15 diagnosis of this type may allow health professionals to employ preventative measures or aggressive treatment earlier thereby preventing the development or further progression of the cancer.

Moreover, colon and/or colon cancer related polypeptides of the present invention can be used to treat or prevent diseases or conditions such as, for example, gastrointestinal  
20 disorders, reproductive disorders, neural disorders, immune system disorders, muscular disorders, pulmonary disorders, cardiovascular disorders, renal disorders, proliferative disorders, and/or cancerous diseases and conditions. For example, patients can be administered a polypeptide of the present invention in an effort to replace absent or decreased levels of the polypeptide (e.g., insulin), to supplement absent or decreased levels of  
25 a different polypeptide (e.g., hemoglobin S for hemoglobin B, SOD, catalase, DNA repair proteins), to inhibit the activity of a polypeptide (e.g., an oncogene or tumor suppressor), to activate the activity of a polypeptide (e.g., by binding to a receptor), to reduce the activity of a membrane bound receptor by competing with it for free ligand (e.g., soluble TNF receptors used in reducing inflammation), or to bring about a desired response (e.g., blood vessel  
30 growth inhibition, enhancement of the immune response to proliferative cells or tissues).

Similarly, antibodies directed to a polypeptide of the present invention can also be used to treat disease (as described supra, and elsewhere herein). For example, administration



of an antibody directed to a polypeptide of the present invention can bind, and/or neutralize the polypeptide, and/or reduce overproduction of the polypeptide. Similarly, administration of an antibody can activate the polypeptide, such as by binding to a polypeptide bound to a membrane (receptor).

5        At the very least, the polypeptides of the present invention can be used as molecular weight markers on SDS-PAGE gels or on molecular sieve gel filtration columns using methods well known to those of skill in the art. Polypeptides can also be used to raise antibodies, which in turn are used to measure protein expression from a recombinant cell, as a way of assessing transformation of the host cell. Moreover, the polypeptides of the present  
10        invention can be used to test the following biological activities.

#### **Gene Therapy Methods**

Another aspect of the present invention is to gene therapy methods for treating disorders, diseases and conditions. The gene therapy methods relate to the introduction of  
15        nucleic acid (DNA, RNA and antisense DNA or RNA) sequences into an animal to achieve expression of the polypeptide of the present invention. This method requires a polynucleotide which codes for a polypeptide operatively linked to a promoter and any other genetic elements necessary for the expression of the polypeptide by the target tissue. Such gene therapy and delivery techniques are known in the art, see, for example, WO90/11092, which  
20        is herein incorporated by reference.

Thus, for example, cells from a patient may be engineered with a polynucleotide (DNA or RNA) comprising a promoter operably linked to a polynucleotide ex vivo, with the engineered cells then being provided to a patient to be treated with the polypeptide. Such methods are well-known in the art. For example, see Belldgrun, A., et al., J. Natl. Cancer  
25        Inst. 85: 207-216 (1993); Ferrantini, M. et al., Cancer Research 53: 1107-1112 (1993); Ferrantini, M. et al., J. Immunology 153: 4604-4615 (1994); Kaido, T., et al., Int. J. Cancer 60: 221-229 (1995); Ogura, H., et al., Cancer Research 50: 5102-5106 (1990); Santodonato, L., et al., Human Gene Therapy 7:1-10 (1996); Santodonato, L., et al., Gene Therapy 4:1246-1255 (1997); and Zhang, J.-F. et al., Cancer Gene Therapy 3: 31-38 (1996)), which are herein  
30        incorporated by reference. In one embodiment, the cells which are engineered are arterial cells. The arterial cells may be reintroduced into the patient through direct injection to the artery, the tissues surrounding the artery, or through catheter injection.

As discussed in more detail below, the polynucleotide constructs can be delivered by any method that delivers injectable materials to the cells of an animal, such as, injection into the interstitial space of tissues (heart, muscle, skin, lung, liver, and the like). The polynucleotide constructs may be delivered in a pharmaceutically acceptable liquid or aqueous carrier.

In one embodiment, the polynucleotide is delivered as a naked polynucleotide. The term "naked" polynucleotide, DNA or RNA refers to sequences that are free from any delivery vehicle that acts to assist, promote or facilitate entry into the cell, including viral sequences, viral particles, liposome formulations, lipofectin or precipitating agents and the like. However, the polynucleotides can also be delivered in liposome formulations and lipofectin formulations and the like can be prepared by methods well known to those skilled in the art. Such methods are described, for example, in U.S. Patent Nos. 5,593,972, 5,589,466, and 5,580,859, which are herein incorporated by reference.

The polynucleotide vector constructs used in the gene therapy method are preferably constructs that will not integrate into the host genome nor will they contain sequences that allow for replication. Appropriate vectors include pWLNEO, pSV2CAT, pOG44, pXT1 and pSG available from Stratagene; pSVK3, pBPV, pMSG and pSVL available from Pharmacia; and pEF1/V5, pcDNA3.1, and pRc/CMV2 available from Invitrogen. Other suitable vectors will be readily apparent to the skilled artisan.

Any strong promoter known to those skilled in the art can be used for driving the expression of polynucleotide sequence. Suitable promoters include adenoviral promoters, such as the adenoviral major late promoter; or heterologous promoters, such as the cytomegalovirus (CMV) promoter; the respiratory syncytial virus (RSV) promoter; inducible promoters, such as the MMT promoter, the metallothionein promoter; heat shock promoters; the albumin promoter; the ApoA1 promoter; human globin promoters; viral thymidine kinase promoters, such as the Herpes Simplex thymidine kinase promoter; retroviral LTRs; the b-actin promoter; and human growth hormone promoters. The promoter also may be the native promoter for the polypeptide of the present invention.

Unlike other gene therapy techniques, one major advantage of introducing naked nucleic acid sequences into target cells is the transitory nature of the polynucleotide synthesis in the cells. Studies have shown that non-replicating DNA sequences can be introduced into cells to provide production of the desired polypeptide for periods of up to six months.

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The polynucleotide construct can be delivered to the interstitial space of tissues within the an animal, including of muscle, skin, brain, lung, liver, spleen, bone marrow, thymus, heart, lymph, blood, bone, cartilage, pancreas, kidney, gall bladder, stomach, intestine, testis, ovary, uterus, rectum, nervous system, eye, gland, and connective tissue. Interstitial space of the tissues comprises the intercellular, fluid, mucopolysaccharide matrix among the reticular fibers of organ tissues, elastic fibers in the walls of vessels or chambers, collagen fibers of fibrous tissues, or that same matrix within connective tissue ensheathing muscle cells or in the lacunae of bone. It is similarly the space occupied by the plasma of the circulation and the lymph fluid of the lymphatic channels. Delivery to the interstitial space of muscle tissue is preferred for the reasons discussed below. They may be conveniently delivered by injection into the tissues comprising these cells. They are preferably delivered to and expressed in persistent, non-dividing cells which are differentiated, although delivery and expression may be achieved in non-differentiated or less completely differentiated cells, such as, for example, stem cells of blood or skin fibroblasts. In vivo muscle cells are particularly competent in their ability to take up and express polynucleotides.

For the naked nucleic acid sequence injection, an effective dosage amount of DNA or RNA will be in the range of from about 0.05 mg/kg body weight to about 50 mg/kg body weight. Preferably the dosage will be from about 0.005 mg/kg to about 20 mg/kg and more preferably from about 0.05 mg/kg to about 5 mg/kg. Of course, as the artisan of ordinary skill will appreciate, this dosage will vary according to the tissue site of injection. The appropriate and effective dosage of nucleic acid sequence can readily be determined by those of ordinary skill in the art and may depend on the condition being treated and the route of administration.

The preferred route of administration is by the parenteral route of injection into the interstitial space of tissues. However, other parenteral routes may also be used, such as, inhalation of an aerosol formulation particularly for delivery to lungs or bronchial tissues, throat or mucous membranes of the nose. In addition, naked DNA constructs can be delivered to arteries during angioplasty by the catheter used in the procedure.

The naked polynucleotides are delivered by any method known in the art, including, but not limited to, direct needle injection at the delivery site, intravenous injection, topical administration, catheter infusion, and so-called "gene guns". These delivery methods are known in the art.

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The constructs may also be delivered with delivery vehicles such as viral sequences, viral particles, liposome formulations, lipofectin, precipitating agents, etc. Such methods of delivery are known in the art.

In certain embodiments, the polynucleotide constructs are complexed in a liposome preparation. Liposomal preparations for use in the instant invention include cationic (positively charged), anionic (negatively charged) and neutral preparations. However, cationic liposomes are particularly preferred because a tight charge complex can be formed between the cationic liposome and the polyanionic nucleic acid. Cationic liposomes have been shown to mediate intracellular delivery of plasmid DNA (Felgner et al., Proc. Natl. Acad. Sci. USA (1987) 84:7413-7416, which is herein incorporated by reference); mRNA (Malone et al., Proc. Natl. Acad. Sci. USA (1989) 86:6077-6081, which is herein incorporated by reference); and purified transcription factors (Debs et al., J. Biol. Chem. (1990) 265:10189-10192, which is herein incorporated by reference), in functional form.

Cationic liposomes are readily available. For example, N[1-2,3-dioleoyloxy)propyl]-N,N,N-triethylammonium (DOTMA) liposomes are particularly useful and are available under the trademark Lipofectin, from GIBCO BRL, Grand Island, N.Y. (See, also, Felgner et al., Proc. Natl. Acad. Sci. USA (1987) 84:7413-7416, which is herein incorporated by reference). Other commercially available liposomes include transfectace (DDAB/DOPE) and DOTAP/DOPE (Boehringer).

Other cationic liposomes can be prepared from readily available materials using techniques well known in the art. See, e.g. PCT Publication No. WO 90/11092 (which is herein incorporated by reference) for a description of the synthesis of DOTAP (1,2-bis(oleoyloxy)-3-(trimethylammonio)propane) liposomes. Preparation of DOTMA liposomes is explained in the literature, see, e.g., P. Felgner et al., Proc. Natl. Acad. Sci. USA 84:7413-7417, which is herein incorporated by reference. Similar methods can be used to prepare liposomes from other cationic lipid materials.

Similarly, anionic and neutral liposomes are readily available, such as from Avanti Polar Lipids (Birmingham, Ala.), or can be easily prepared using readily available materials. Such materials include phosphatidyl choline, cholesterol, phosphatidyl ethanolamine, dioleoylphosphatidyl choline (DOPC), dioleoylphosphatidyl glycerol (DOPG), dioleoylphosphatidyl ethanolamine (DOPE), among others. These materials can also be mixed

with the DOTMA and DOTAP starting materials in appropriate ratios. Methods for making liposomes using these materials are well known in the art.

For example, commercially dioleoylphosphatidyl choline (DOPC), dioleoylphosphatidyl glycerol (DOPG), and dioleoylphosphatidyl ethanolamine (DOPE) can be used in various combinations to make conventional liposomes, with or without the addition of cholesterol. Thus, for example, DOPG/DOPC vesicles can be prepared by drying 50 mg each of DOPG and DOPC under a stream of nitrogen gas into a sonication vial. The sample is placed under a vacuum pump overnight and is hydrated the following day with deionized water. The sample is then sonicated for 2 hours in a capped vial, using a Heat Systems model 350 sonicator equipped with an inverted cup (bath type) probe at the maximum setting while the bath is circulated at 15EC. Alternatively, negatively charged vesicles can be prepared without sonication to produce multilamellar vesicles or by extrusion through nucleopore membranes to produce unilamellar vesicles of discrete size. Other methods are known and available to those of skill in the art.

The liposomes can comprise multilamellar vesicles (MLVs), small unilamellar vesicles (SUVs), or large unilamellar vesicles (LUVs), with SUVs being preferred. The various liposome-nucleic acid complexes are prepared using methods well known in the art. See, e.g., Straubinger et al., *Methods of Immunology* (1983), 101:512-527, which is herein incorporated by reference. For example, MLVs containing nucleic acid can be prepared by depositing a thin film of phospholipid on the walls of a glass tube and subsequently hydrating with a solution of the material to be encapsulated. SUVs are prepared by extended sonication of MLVs to produce a homogeneous population of unilamellar liposomes. The material to be entrapped is added to a suspension of preformed MLVs and then sonicated. When using liposomes containing cationic lipids, the dried lipid film is resuspended in an appropriate solution such as sterile water or an isotonic buffer solution such as 10 mM Tris/NaCl, sonicated, and then the preformed liposomes are mixed directly with the DNA. The liposome and DNA form a very stable complex due to binding of the positively charged liposomes to the cationic DNA. SUVs find use with small nucleic acid fragments. LUVs are prepared by a number of methods, well known in the art. Commonly used methods include  $\text{Ca}^{2+}$ -EDTA chelation (Papahadjopoulos et al., *Biochim. Biophys. Acta* (1975) 394:483; Wilson et al., *Cell* (1979) 17:77); ether injection (Deamer, D. and Bangham, A., *Biochim. Biophys. Acta* (1976) 443:629; Ostro et al., *Biochem. Biophys. Res. Commun.* (1977) 76:836; Fraley et al.,

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Proc. Natl. Acad. Sci. USA (1979) 76:3348); detergent dialysis (Enoch, H. and Strittmatter, P., Proc. Natl. Acad. Sci. USA (1979) 76:145); and reverse-phase evaporation (REV) (Fraley et al., J. Biol. Chem. (1980) 255:10431; Szoka, F. and Papahadjopoulos, D., Proc. Natl. Acad. Sci. USA (1978) 75:145; Schaefer-Ridder et al., Science (1982) 215:166), which are  
5 herein incorporated by reference.

Generally, the ratio of DNA to liposomes will be from about 10:1 to about 1:10. Preferably, the ration will be from about 5:1 to about 1:5. More preferably, the ration will be about 3:1 to about 1:3. Still more preferably, the ratio will be about 1:1.

U.S. Patent No. 5,676,954 (which is herein incorporated by reference) reports on the  
10 injection of genetic material, complexed with cationic liposomes carriers, into mice. U.S. Patent Nos. 4,897,355, 4,946,787, 5,049,386, 5,459,127, 5,589,466, 5,693,622, 5,580,859, 5,703,055, and international publication no. WO 94/9469 (which are herein incorporated by reference) provide cationic lipids for use in transfecting DNA into cells and mammals. U.S.  
15 Patent Nos. 5,589,466, 5,693,622, 5,580,859, 5,703,055, and international publication no. WO 94/9469 (which are herein incorporated by reference) provide methods for delivering DNA-cationic lipid complexes to mammals.

In certain embodiments, cells are engineered, ex vivo or in vivo, using a retroviral particle containing RNA which comprises a SEQ ID NO:X. Retroviruses from which the retroviral plasmid vectors may be derived include, but are not limited to, Moloney Murine  
20 Leukemia Virus, spleen necrosis virus, Rous sarcoma Virus, Harvey Sarcoma Virus, avian leukosis virus, gibbon ape leukemia virus, human immunodeficiency virus, Myeloproliferative Sarcoma Virus, and mammary tumor virus.

The retroviral plasmid vector is employed to transduce packaging cell lines to form producer cell lines. Examples of packaging cells which may be transfected include, but are  
25 not limited to, the PE501, PA317, R-2, R-AM, PA12, T19-14X, VT-19-17-H2, RCRE, RCRIP, GP+E-86, GP+envAm12, and DAN cell lines as described in Miller, Human Gene Therapy 1:5-14 (1990), which is incorporated herein by reference in its entirety. The vector may transduce the packaging cells through any means known in the art. Such means include, but are not limited to, electroporation, the use of liposomes, and CaPO<sub>4</sub> precipitation. In one  
30 alternative, the retroviral plasmid vector may be encapsulated into a liposome, or coupled to a lipid, and then administered to a host.

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The producer cell line generates infectious retroviral vector particles which include polynucleotide encoding SEQ ID NO:Y. Such retroviral vector particles then may be employed, to transduce eukaryotic cells, either in vitro or in vivo. The transduced eukaryotic cells will express SEQ ID NO:Y.

5 In certain other embodiments, cells are engineered, ex vivo or in vivo, with polynucleotide of the present invention contained in an adenovirus vector. Adenovirus can be manipulated such that it encodes and expresses the polypeptide of the present invention, and at the same time is inactivated in terms of its ability to replicate in a normal lytic viral life cycle. Adenovirus expression is achieved without integration of the viral DNA into the  
10 host cell chromosome, thereby alleviating concerns about insertional mutagenesis. Furthermore, adenoviruses have been used as live enteric vaccines for many years with an excellent safety profile (Schwartz, A. R. et al. (1974) Am. Rev. Respir. Dis.109:233-238). Finally, adenovirus mediated gene transfer has been demonstrated in a number of instances including transfer of alpha-1-antitrypsin and CFTR to the lungs of cotton rats (Rosenfeld, M.  
15 A. et al. (1991) Science 252:431-434; Rosenfeld et al., (1992) Cell 68:143-155). Furthermore, extensive studies to attempt to establish adenovirus as a causative agent in human cancer were uniformly negative (Green, M. et al. (1979) Proc. Natl. Acad. Sci. USA 76:6606).

Suitable adenoviral vectors useful in the present invention are described, for example,  
20 in Kozarsky and Wilson, Curr. Opin. Genet. Devel. 3:499-503 (1993); Rosenfeld et al., Cell 68:143-155 (1992); Engelhardt et al., Human Genet. Ther. 4:759-769 (1993); Yang et al., Nature Genet. 7:362-369 (1994); Wilson et al., Nature 365:691-692 (1993); and U.S. Patent No. 5,652,224, which are herein incorporated by reference. For example, the adenovirus vector Ad2 is useful and can be grown in human 293 cells. These cells contain the E1 region  
25 of adenovirus and constitutively express Ela and Elb, which complement the defective adenoviruses by providing the products of the genes deleted from the vector. In addition to Ad2, other varieties of adenovirus (e.g., Ad3, Ad5, and Ad7) are also useful in the present invention.

Preferably, the adenoviruses used in the present invention are replication deficient.  
30 Replication deficient adenoviruses require the aid of a helper virus and/or packaging cell line to form infectious particles. The resulting virus is capable of infecting cells and can express a polynucleotide of interest which is operably linked to a promoter, but cannot replicate in

most cells. Replication deficient adenoviruses may be deleted in one or more of all or a portion of the following genes: E1a, E1b, E3, E4, E2a, or L1 through L5.

In certain other embodiments, the cells are engineered, ex vivo or in vivo, using an adeno-associated virus (AAV). AAVs are naturally occurring defective viruses that require  
5 helper viruses to produce infectious particles (Muzyczka, N., Curr. Topics in Microbiol. Immunol. 158:97 (1992)). It is also one of the few viruses that may integrate its DNA into non-dividing cells. Vectors containing as little as 300 base pairs of AAV can be packaged and can integrate, but space for exogenous DNA is limited to about 4.5 kb. Methods for producing and using such AAVs are known in the art. See, for example, U.S. Patent Nos.  
10 5,139,941, 5,173,414, 5,354,678, 5,436,146, 5,474,935, 5,478,745, and 5,589,377.

For example, an appropriate AAV vector for use in the present invention will include all the sequences necessary for DNA replication, encapsidation, and host-cell integration. The polynucleotide construct is inserted into the AAV vector using standard cloning methods, such as those found in Sambrook et al., Molecular Cloning: A Laboratory Manual,  
15 Cold Spring Harbor Press (1989). The recombinant AAV vector is then transfected into packaging cells which are infected with a helper virus, using any standard technique, including lipofection, electroporation, calcium phosphate precipitation, etc. Appropriate helper viruses include adenoviruses, cytomegaloviruses, vaccinia viruses, or herpes viruses. Once the packaging cells are transfected and infected, they will produce infectious AAV viral  
20 particles which contain the polynucleotide construct. These viral particles are then used to transduce eukaryotic cells, either ex vivo or in vivo. The transduced cells will contain the polynucleotide construct integrated into its genome, and will express the polypeptide of the present invention.

Another method of gene therapy involves operably associating heterologous control  
25 regions and endogenous polynucleotide sequences (e.g. encoding the polypeptide of the present invention) via homologous recombination (see, e.g., U.S. Patent No. 5,641,670, issued June 24, 1997; International Publication No. WO 96/29411, published September 26, 1996; International Publication No. WO 94/12650, published August 4, 1994; Koller et al., Proc. Natl. Acad. Sci. USA 86:8932-8935 (1989); and Zijlstra et al., Nature 342:435-438  
30 (1989). This method involves the activation of a gene which is present in the target cells, but which is not normally expressed in the cells, or is expressed at a lower level than desired.



Polynucleotide constructs are made, using standard techniques known in the art, which contain the promoter with targeting sequences flanking the promoter. Suitable promoters are described herein. The targeting sequence is sufficiently complementary to an endogenous sequence to permit homologous recombination of the promoter-targeting sequence with the endogenous sequence. The targeting sequence will be sufficiently near the 5' end of the desired endogenous polynucleotide sequence so the promoter will be operably linked to the endogenous sequence upon homologous recombination.

The promoter and the targeting sequences can be amplified using PCR. Preferably, the amplified promoter contains distinct restriction enzyme sites on the 5' and 3' ends. Preferably, the 3' end of the first targeting sequence contains the same restriction enzyme site as the 5' end of the amplified promoter and the 5' end of the second targeting sequence contains the same restriction site as the 3' end of the amplified promoter. The amplified promoter and targeting sequences are digested and ligated together.

The promoter-targeting sequence construct is delivered to the cells, either as naked polynucleotide, or in conjunction with transfection-facilitating agents, such as liposomes, viral sequences, viral particles, whole viruses, lipofection, precipitating agents, etc., described in more detail above. The P promoter-targeting sequence can be delivered by any method, included direct needle injection, intravenous injection, topical administration, catheter infusion, particle accelerators, etc. The methods are described in more detail below.

The promoter-targeting sequence construct is taken up by cells. Homologous recombination between the construct and the endogenous sequence takes place, such that an endogenous sequence is placed under the control of the promoter. The promoter then drives the expression of the endogenous sequence.

The polynucleotides encoding the polypeptide of the present invention may be administered along with other polynucleotides encoding an angiogenic protein. Examples of angiogenic proteins include, but are not limited to, acidic and basic fibroblast growth factors, VEGF-1, VEGF-2, VEGF-3, epidermal growth factor alpha and beta, platelet-derived endothelial cell growth factor, platelet-derived growth factor, tumor necrosis factor alpha, hepatocyte growth factor, insulin like growth factor, colony stimulating factor, macrophage colony stimulating factor, granulocyte/macrophage colony stimulating factor, and nitric oxide synthase.

Preferably, the polynucleotide encoding the polypeptide of the present invention contains a secretory signal sequence that facilitates secretion of the protein. Typically, the signal sequence is positioned in the coding region of the polynucleotide to be expressed towards or at the 5' end of the coding region. The signal sequence may be  
5 homologous or heterologous to the polynucleotide of interest and may be homologous or heterologous to the cells to be transfected. Additionally, the signal sequence may be chemically synthesized using methods known in the art.

Any mode of administration of any of the above-described polynucleotides constructs can be used so long as the mode results in the expression of one or more molecules in an  
10 amount sufficient to provide a therapeutic effect. This includes direct needle injection, systemic injection, catheter infusion, biolistic injectors, particle accelerators (i.e., "gene guns"), gelfoam sponge depots, other commercially available depot materials, osmotic pumps (e.g., Alza minipumps), oral or suppositorial solid (tablet or pill) pharmaceutical formulations, and decanting or topical applications during surgery. For example, direct  
15 injection of naked calcium phosphate-precipitated plasmid into rat liver and rat spleen or a protein-coated plasmid into the portal vein has resulted in gene expression of the foreign gene in the rat livers (Kaneda et al., Science 243:375 (1989)).

A preferred method of local administration is by direct injection. Preferably, a recombinant molecule of the present invention complexed with a delivery vehicle is  
20 administered by direct injection into or locally within the area of arteries. Administration of a composition locally within the area of arteries refers to injecting the composition centimeters and preferably, millimeters within arteries.

Another method of local administration is to contact a polynucleotide construct of the present invention in or around a surgical wound. For example, a patient can undergo surgery  
25 and the polynucleotide construct can be coated on the surface of tissue inside the wound or the construct can be injected into areas of tissue inside the wound.

Therapeutic compositions useful in systemic administration, include recombinant molecules of the present invention complexed to a targeted delivery vehicle of the present invention. Suitable delivery vehicles for use with systemic administration comprise  
30 liposomes comprising ligands for targeting the vehicle to a particular site.

Preferred methods of systemic administration, include intravenous injection, aerosol, oral and percutaneous (topical) delivery. Intravenous injections can be performed using

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methods standard in the art. Aerosol delivery can also be performed using methods standard in the art (see, for example, Stribling et al., Proc. Natl. Acad. Sci. USA 189:11277-11281, 1992, which is incorporated herein by reference). Oral delivery can be performed by complexing a polynucleotide construct of the present invention to a carrier capable of withstanding degradation by digestive enzymes in the gut of an animal. Examples of such carriers, include plastic capsules or tablets, such as those known in the art. Topical delivery can be performed by mixing a polynucleotide construct of the present invention with a lipophilic reagent (e.g., DMSO) that is capable of passing into the skin.

Determining an effective amount of substance to be delivered can depend upon a number of factors including, for example, the chemical structure and biological activity of the substance, the age and weight of the animal, the precise condition requiring treatment and its severity, and the route of administration. The frequency of treatments depends upon a number of factors, such as the amount of polynucleotide constructs administered per dose, as well as the health and history of the subject. The precise amount, number of doses, and timing of doses will be determined by the attending physician or veterinarian.

Therapeutic compositions of the present invention can be administered to any animal, preferably to mammals and birds. Preferred mammals include humans, dogs, cats, mice, rats, rabbits sheep, cattle, horses and pigs, with humans being particularly preferred

## **Biological Activities**

Polynucleotides or polypeptides, or agonists or antagonists of the present invention, can be used in assays to test for one or more biological activities. If these polynucleotides or polypeptides, or agonists or antagonists of the present invention, do exhibit activity in a particular assay, it is likely that these molecules may be involved in the diseases associated with the biological activity. Thus, the polynucleotides and polypeptides, and agonists or antagonists could be used to treat the associated disease.

The colon and/or colon cancer related polynucleotides and/or polypeptides of the invention are expressed at significantly enhanced levels in human colon and colon cancer tissues.

Thus, colon and/or colon cancer related polynucleotides and/or polypeptides of the invention may be useful as a therapeutic molecule. It would be useful for diagnosis, detection, treatment and/or prevention of disorders of the colon, including inflammatory

disorders such as, congenital abnormalities, such as atresia and stenosis, Meckel diverticulum, congenital aganglionic megacolon-Hirschsprung disease; enterocolitis, such as diarrhea and dysentary, infectious enterocolitis, including viral gastroenteritis, bacterial enterocolitis, necrotizing enterocolitis, antibiotic-associated colitis (pseudomembranous colitis), and collagenous and lymphocytic colitis, miscellaneous intestinal inflammatory disorders, including parasites and protozoa, amoebic colitis, acquired immunodeficiency syndrome, transplantation, drug-induced intestinal injury, radiation enterocolitis, neutropenic colitis, diverticular colon disease (DCD), inflammatory colonic disease, idiopathic inflammatory bowel disease, such as Crohn's disease (CD), non-inflammatory bowel disease (non-IBD) colonic inflammation; ulcerative disorders such as, ulcerative colitis (UC); eosinophilic colitis; noncancerous tumors, such as, polyps in the colon, adenomas, leiomyomas, lipomas, and angiomas.

Particularly, the colon and/or colon cancer polynucleotides and/or polypeptides of the invention may be a useful therapeutic for tumors, especially of the intestine, such as, carcinoid tumors, lymphomas, non-neoplastic polyps, adenomas, familial syndromes, colorectal carcinogenesis, colorectal carcinoma, cancer of the colon, cancer of the rectum and carcinoid tumors, as well as cancers in other tissues where expression has been indicated. Treatment, diagnosis, detection, and/or prevention of colon disorders could be carried out using a soluble form of a colon and/or colon cancer polypeptides, the colon and/or colon cancer polypeptides ligand, gene therapy, or ex vivo applications. Moreover, inhibitors of colon and/or colon cancer polynucleotides and/or polypeptides, either blocking antibodies or mutant forms, could modulate the expression of colon and/or colon cancer polynucleotides and/or polypeptides. These inhibitors may be useful to treat, diagnose, detect, and/or prevent diseases associated with the misregulation of colon and/or colon cancer polynucleotides and/or polypeptides.

In one embodiment, the invention provides a method for the specific delivery of compositions of the invention to cells (e.g., colon or colon cancer cells) by administering polypeptides of the invention (e.g., colon and/or colon cancer polypeptides or anti-colon cancer antigen antibodies) that are associated with heterologous polypeptides or nucleic acids. In one example, the invention provides a method for delivering a therapeutic protein into the targeted cell (e.g., a colon cancer cell). In another example, the invention provides a method for delivering a single stranded nucleic acid (e.g., antisense or ribozymes) or double

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stranded nucleic acid (e.g., DNA that can integrate into the cell's genome or replicate episomally and that can be transcribed) into the targeted cell.

In another embodiment, the invention provides a method for the specific destruction of cells (e.g., the destruction of tumor cells) by administering polypeptides of the invention  
5 (e.g., colon or colon cancer polypeptides or anti-colon cancer antigen antibodies) in association with toxins or cytotoxic prodrugs.

By "toxin" is meant compounds that bind and activate endogenous cytotoxic effector systems, radioisotopes, holotoxins, modified toxins, catalytic subunits of toxins, cytotoxins (cytotoxic agents), or any molecules or enzymes not normally present in or on the surface of  
10 a cell that under defined conditions cause the cell's death. Toxins that may be used according to the methods of the invention include, but are not limited to, radioisotopes known in the art, compounds such as, for example, antibodies (or complement fixing containing portions thereof) that bind an inherent or induced endogenous cytotoxic effector system, thymidine kinase, endonuclease, RNase, alpha toxin, ricin, abrin, *Pseudomonas* exotoxin A, diphtheria  
15 toxin, saporin, momordin, gelonin, pokeweed antiviral protein, alpha-sarcin and cholera toxin. "Toxin" also includes a cytostatic or cytocidal agent, a therapeutic agent or a radioactive metal ion, e.g., alpha-emitters such as, for example, <sup>213</sup>Bi, or other radioisotopes such as, for example, <sup>103</sup>Pd, <sup>133</sup>Xe, <sup>131</sup>I, <sup>68</sup>Ge, <sup>57</sup>Co, <sup>65</sup>Zn, <sup>85</sup>Sr, <sup>32</sup>P, <sup>35</sup>S, <sup>90</sup>Y, <sup>153</sup>Sm, <sup>153</sup>Gd, <sup>169</sup>Yb, <sup>51</sup>Cr, <sup>54</sup>Mn, <sup>75</sup>Se, <sup>113</sup>Sn, <sup>90</sup>Yttrium, <sup>117</sup>Tin, <sup>186</sup>Rhenium, <sup>166</sup>Holmium, and <sup>188</sup>Rhcnium;  
20 luminescent labels, such as luminol; and fluorescent labels, such as fluorescein and rhodamine, and biotin.

Techniques known in the art may be applied to label antibodies of the invention. Such techniques include, but are not limited to, the use of bifunctional conjugating agents (see e.g., U.S. Patent Nos. 5,756,065; 5,714,631; 5,696,239; 5,652,361; 5,505,931;  
25 5,489,425; 5,435,990; 5,428,139; 5,342,604; 5,274,119; 4,994,560; and 5,808,003; the contents of each of which are hereby incorporated by reference in its entirety). A cytotoxin or cytotoxic agent includes any agent that is detrimental to cells. Examples include paclitaxol, cytochalasin B, gramicidin D, ethidium bromide, emetine, mitomycin, etoposide, tenoposide, vincristine, vinblastine, colchicin, doxorubicin, daunorubicin, dihydroxy  
30 anthracin dione, mitoxantrone, mithramycin, actinomycin D, 1-dehydrotestosterone, glucocorticoids, procaine, tetracaine, lidocaine, propranolol, and puromycin and analogs or homologs thereof. Therapeutic agents include, but are not limited to, antimetabolites (e.g.,

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methotrexate, 6-mercaptopurine, 6-thioguanine, cytarabine, 5-fluorouracil decarbazine), alkylating agents (e.g., mechlorethamine, thioepa chlorambucil, melphalan, carmustine (BSNU) and lomustine (CCNU), cyclophosphamide, busulfan, dibromomannitol, streptozotocin, mitomycin C, and cis-dichlorodiamine platinum (II) (DDP) cisplatin),  
5 anthracyclines (e.g., daunorubicin (formerly daunomycin) and doxorubicin), antibiotics (e.g., dactinomycin (formerly actinomycin), bleomycin, mithramycin, and anthramycin (AMC)), and anti-mitotic agents (e.g., vincristine and vinblastine).

By "cytotoxic prodrug" is meant a non-toxic compound that is converted by an enzyme, normally present in the cell, into a cytotoxic compound. Cytotoxic prodrugs that  
10 may be used according to the methods of the invention include, but are not limited to, glutamyl derivatives of benzoic acid mustard alkylating agent, phosphate derivatives of etoposide or mitomycin C, cytosine arabinoside, daunorubicin, and phenoxyacetamide derivatives of doxorubicin.

It will be appreciated that conditions caused by a decrease in the standard or normal  
15 level of colon and/or colon cancer polynucleotide and/or polypeptide activity in an individual, particularly disorders of the colon, can be treated by administration of colon or colon cancer polypeptide (e.g., in the form of soluble extracellular domain or cells expressing the complete protein) or agonist. Thus, the invention also provides a method of treatment of an individual in need of an increased level of PSGR activity comprising administering to  
20 such an individual a pharmaceutical composition comprising an amount of an isolated colon or colon cancer polypeptide of the invention, or agonist thereof (e.g., an agonistic anti-colon cancer antigen antibody), effective to increase the colon and/or colon cancer polypeptide activity level in such an individual.

It will also be appreciated that conditions caused by a increase in the standard or normal level  
25 of colon and/or colon cancer polynucleotides and/or polypeptides activity in an individual, particularly disorders of the colon, can be treated by administration of colon or colon cancer related polypeptides (e.g., in the form of soluble extracellular domain or cells expressing the complete protein) or antagonist (e.g., an antagonistic anti-colon cancer antigen antibody). Thus, the invention also provides a method of treatment of an individual in need of an  
30 decreased level of colon and/or colon cancer polynucleotides and/or polypeptides activity comprising administering to such an individual a pharmaceutical composition comprising an amount of an isolated colon polypeptide of the invention, or antagonist thereof, effective to

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decrease the colon and/or colon cancer polynucleotides and/or polypeptides activity level in such an individual.

## 5 **Immune Activity**

A polypeptide or polynucleotide, or agonists or antagonists of the present invention may be useful in treating, preventing, and/or diagnosing deficiencies, diseases, or disorders and/or conditions of the immune system, by, for example, activating or inhibiting the proliferation, differentiation, or mobilization (chemotaxis) of immune cells. Immune cells  
10 develop through a process called hematopoiesis, producing myeloid (platelets, red blood cells, neutrophils, and macrophages) and lymphoid (B and T lymphocytes) cells from pluripotent stem cells. The etiology of these immune deficiencies or disorders may be genetic, somatic, such as cancer or some autoimmune disorders, acquired (e.g., by chemotherapy or toxins), or infectious. Moreover, polynucleotides or polypeptides, or  
15 agonists or antagonists of the present invention can be used as a marker or detector of a particular immune system disease or disorder.

Polynucleotides or polypeptides, or agonists or antagonists of the present invention may be useful in treating, preventing, detecting and/or diagnosing diseases, deficiencies or disorders and/or conditions of hematopoietic cells. Polynucleotides or polypeptides, or  
20 agonists or antagonists of the present invention could be used to increase differentiation and proliferation of hematopoietic cells, including the pluripotent stem cells, in an effort to treat those disorders associated with a decrease in certain (or many) types hematopoietic cells. Examples of immunologic deficiency syndromes include, but are not limited to: blood protein disorders (e.g. agammaglobulinemia, dysgammaglobulinemia), ataxia telangiectasia,  
25 common variable immunodeficiency, Digeorge Syndrome, HIV infection, HTLV-BLV infection, leukocyte adhesion deficiency syndrome, lymphopenia, phagocyte bactericidal dysfunction, severe combined immunodeficiency (SCIDs), Wiskott-Aldrich Disorder, anemia, thrombocytopenia, or hemoglobinuria.

Moreover, polynucleotides or polypeptides, or agonists or antagonists of the present  
30 invention could also be used to modulate hemostatic (the stopping of bleeding) or thrombolytic activity (clot formation). For example, by increasing hemostatic or thrombolytic activity, polynucleotides or polypeptides, or agonists or antagonists of the

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present invention could be used to treat blood coagulation disorders (e.g., afibrinogenemia, factor deficiencies), blood platelet disorders (e.g. thrombocytopenia), or wounds resulting from trauma, surgery, or other causes. Alternatively, polynucleotides or polypeptides, or agonists or antagonists of the present invention that can decrease hemostatic or thrombolytic activity could be used to inhibit or dissolve clotting. These molecules could be important in the treatment of heart attacks (infarction), strokes, or scarring.

Polynucleotides or polypeptides, or agonists or antagonists of the present invention may also be useful in treating, preventing, detecting and/or diagnosing autoimmune disorders. Many autoimmune disorders result from inappropriate recognition of self as foreign material by immune cells. This inappropriate recognition results in an immune response leading to the destruction of the host tissue. Therefore, the administration of polynucleotides or polypeptides, or agonists or antagonists of the present invention that can inhibit an immune response, particularly the proliferation, differentiation, or chemotaxis of T-cells, may be an effective therapy in preventing autoimmune disorders.

Autoimmune diseases or disorders that may be treated, prevented, and/or diagnosed by polynucleotides, polypeptides, antibodies, and/or agonists or antagonists of the present invention include, but are not limited to, one or more of the following: autoimmune hemolytic anemia, autoimmune neonatal thrombocytopenia, idiopathic thrombocytopenia purpura, autoimmunocytopenia, hemolytic anemia, antiphospholipid syndrome, dermatitis, allergic encephalomyelitis, myocarditis, relapsing polychondritis, rheumatic heart disease, glomerulonephritis (e.g. IgA nephropathy), Multiple Sclerosis, Neuritis, Uveitis Ophthalmia, Polyendocrinopathies, Purpura (e.g., Henloch-Schoenlein purpura), Reiter's Disease, Stiff-Man Syndrome, Autoimmune Pulmonary Inflammation, Autism, Guillain-Barre Syndrome, insulin dependent diabetes mellitus, and autoimmune inflammatory eye, autoimmune thyroiditis, hypothyroidism (i.e., Hashimoto's thyroiditis, systemic lupus erythematosus, Goodpasture's syndrome, Pemphigus, Receptor autoimmunities such as, for example, (a) Graves' Disease, (b) Myasthenia Gravis, and (c) insulin resistance, autoimmune hemolytic anemia, autoimmune thrombocytopenic purpura, rheumatoid arthritis, scleroderma with anti-collagen antibodies, mixed connective tissue disease, polymyositis/dermatomyositis, pernicious anemia, idiopathic Addison's disease, infertility, glomerulonephritis such as primary glomerulonephritis and IgA nephropathy, bullous pemphigoid, Sjogren's syndrome, diabetes mellitus, and adrenergic drug resistance (including adrenergic drug resistance with



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asthma or cystic fibrosis), chronic active hepatitis, primary biliary cirrhosis, other endocrine gland failure, vitiligo, vasculitis, post-MI, cardiomy syndrome, urticaria, atopic dermatitis, asthma, inflammatory myopathies, and other inflammatory, granulomatous, degenerative, and atrophic disorders.

5 Additional autoimmune disorders (that are probable) that may be treated, prevented, and/or diagnosed with the compositions of the invention include, but are not limited to, rheumatoid arthritis (often characterized, e.g., by immune complexes in joints), scleroderma with anti-collagen antibodies (often characterized, e.g., by nucleolar and other nuclear antibodies), mixed connective tissue disease (often characterized, e.g., by antibodies to  
10 extractable nuclear antigens (e.g., ribonucleoprotein)), polymyositis (often characterized, e.g., by nonhistone ANA), pernicious anemia (often characterized, e.g., by antiparietal cell, microsomes, and intrinsic factor antibodies), idiopathic Addison's disease (often characterized, e.g., by humoral and cell-mediated adrenal cytotoxicity, infertility (often characterized, e.g., by antispermatozoal antibodies), glomerulonephritis (often characterized,  
15 e.g., by glomerular basement membrane antibodies or immune complexes), bullous pemphigoid (often characterized, e.g., by IgG and complement in basement membrane), Sjogren's syndrome (often characterized, e.g., by multiple tissue antibodies, and/or a specific nonhistone ANA (SS-B)), diabetes mellitus (often characterized, e.g., by cell-mediated and humoral islet cell antibodies), and adrenergic drug resistance (including adrenergic drug  
20 resistance with asthma or cystic fibrosis) (often characterized, e.g., by beta-adrenergic receptor antibodies).

Additional autoimmune disorders (that are possible) that may be treated, prevented, and/or diagnosed with the compositions of the invention include, but are not limited to, chronic active hepatitis (often characterized, e.g., by smooth muscle antibodies), primary  
25 biliary cirrhosis (often characterized, e.g., by mitochondrial antibodies), other endocrine gland failure (often characterized, e.g., by specific tissue antibodies in some cases), vitiligo (often characterized, e.g., by melanocyte antibodies), vasculitis (often characterized, e.g., by Ig and complement in vessel walls and/or low serum complement), post-MI (often characterized, e.g., by myocardial antibodies), cardiomy syndrome (often characterized, e.g., by  
30 myocardial antibodies), urticaria (often characterized, e.g., by IgG and IgM antibodies to IgE), atopic dermatitis (often characterized, e.g., by IgG and IgM antibodies to IgE), asthma

(often characterized, e.g., by IgG and IgM antibodies to IgE), and many other inflammatory, granulamatous, degenerative, and atrophic disorders.

In a preferred embodiment, the autoimmune diseases and disorders and/or conditions associated with the diseases and disorders recited above are treated, prevented, and/or  
5 diagnosed using for example, antagonists or agonists, polypeptides or polynucleotides, or antibodies of the present invention.

In a preferred embodiment polynucleotides, polypeptides, antibodies, and/or agonists or antagonists of the present invention could be used as an agent to boost immunoresponsiveness among B cell and/or T cell immunodeficient individuals.

10 B cell immunodeficiencies that may be ameliorated or treated by administering the polypeptides or polynucleotides of the invention, and/or agonists thereof, include, but are not limited to, severe combined immunodeficiency (SCID)-X linked, SCID-autosomal, adenosine deaminase deficiency (ADA deficiency), X-linked agammaglobulinemia (XLA), Bruton's disease, congenital agammaglobulinemia, X-linked infantile agammaglobulinemia,  
15 acquired agammaglobulinemia, adult onset agammaglobulinemia, late-onset agammaglobulinemia, dysgammaglobulinemia, hypogammaglobulinemia, transient hypogammaglobulinemia of infancy, unspecified hypogammaglobulinemia, agammaglobulinemia, common variable immunodeficiency (CVI) (acquired), Wiskott-Aldrich Syndrome (WAS), X-linked immunodeficiency with hyper IgM, non X-linked  
20 immunodeficiency with hyper IgM, selective IgA deficiency, IgG subclass deficiency (with or without IgA deficiency), antibody deficiency with normal or elevated Igs, immunodeficiency with thymoma, Ig heavy chain deletions, kappa chain deficiency, B cell lymphoproliferative disorder (BLPD), selective IgM immunodeficiency, recessive agammaglobulinemia (Swiss type), reticular dysgenesis, neonatal neutropenia, severe  
25 congenital leukopenia, thymic alymphoplasia-aplasia or dysplasia with immunodeficiency, ataxia-telangiectasia, short limbed dwarfism, X-linked lymphoproliferative syndrome (XLP), Nezelof syndrome-combined immunodeficiency with Igs, purine nucleoside phosphorylase deficiency (PNP), MHC Class II deficiency (Bare Lymphocyte Syndrome) and severe combined immunodeficiency.

30 T cell deficiencies that may be ameliorated or treated by administering the polypeptides or polynucleotides of the invention, and/or agonists thereof include, but are not limited to, for example, DiGeorge anomaly, thymic hypoplasia, third and fourth pharyngeal

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pouch syndrome, 22q11.2 deletion, chronic mucocutaneous candidiasis, natural killer cell deficiency (NK), idiopathic CD4+ T-lymphocytopenia, immunodeficiency with predominant T cell defect (unspecified), and unspecified immunodeficiency of cell mediated immunity. In specific embodiments, DiGeorge anomaly or conditions associated with DiGeorge anomaly  
5 are ameliorated or treated by, for example, administering the polypeptides or polynucleotides of the invention, or antagonists or agonists thereof.

Other immunodeficiencies that may be ameliorated or treated by administering polypeptides or polynucleotides of the invention, and/or agonists thereof, include, but are not limited to, severe combined immunodeficiency (SCID; e.g., X-linked SCID, autosomal  
10 SCID, and adenosine deaminase deficiency), ataxia-telangiectasia, Wiskott-Aldrich syndrome, short-limber dwarfism, X-linked lymphoproliferative syndrome (XLP), Nezelof syndrome (e.g., purine nucleoside phosphorylase deficiency), MHC Class II deficiency. In specific embodiments, ataxia-telangiectasia or conditions associated with ataxia-telangiectasia are ameliorated or treated by administering the polypeptides or polynucleotides  
15 of the invention, and/or agonists thereof.

In a specific preferred embodiment, rheumatoid arthritis is treated, prevented, and/or diagnosed using polynucleotides, polypeptides, antibodies, and/or agonists or antagonists of the present invention. In another specific preferred embodiment, systemic lupus erythematosus is treated, prevented, and/or diagnosed using polynucleotides, polypeptides, antibodies,  
20 and/or agonists or antagonists of the present invention. In another specific preferred embodiment, idiopathic thrombocytopenia purpura is treated, prevented, and/or diagnosed using polynucleotides, polypeptides, antibodies, and/or agonists or antagonists of the present invention. In another specific preferred embodiment IgA nephropathy is treated, prevented, and/or diagnosed using polynucleotides, polypeptides, antibodies, and/or agonists or  
25 antagonists of the present invention. In a preferred embodiment, the autoimmune diseases and disorders and/or conditions associated with the diseases and disorders recited above are treated, prevented, and/or diagnosed using antibodies against the protein of the invention.

Similarly, allergic reactions and conditions, such as asthma (particularly allergic asthma) or other respiratory problems, may also be treated, prevented, and/or diagnosed  
30 using polypeptides, antibodies, or polynucleotides of the invention, and/or agonists or antagonists thereof. Moreover, these molecules can be used to treat, prevent, and/or diagnose anaphylaxis, hypersensitivity to an antigenic molecule, or blood group incompatibility.

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Moreover, inflammatory conditions may also be treated, diagnosed, and/or prevented with polynucleotides, polypeptides, antibodies, and/or agonists or antagonists of the present invention. Such inflammatory conditions include, but are not limited to, for example, respiratory disorders (such as, e.g., asthma and allergy); gastrointestinal disorders (such as, e.g., inflammatory bowel disease); cancers (such as, e.g., gastric, ovarian, lung, bladder, liver, and breast); CNS disorders (such as, e.g., multiple sclerosis, blood-brain barrier permeability, ischemic brain injury and/or stroke, traumatic brain injury, neurodegenerative disorders (such as, e.g., Parkinson's disease and Alzheimer's disease), AIDS-related dementia, and prion disease); cardiovascular disorders (such as, e.g., atherosclerosis, myocarditis, cardiovascular disease, and cardiopulmonary bypass complications); as well as many additional diseases, conditions, and disorders that are characterized by inflammation (such as, e.g., chronic hepatitis (B and C), rheumatoid arthritis, gout, trauma, septic shock, pancreatitis, sarcoidosis, dermatitis, renal ischemia-reperfusion injury, Grave's disease, systemic lupus erythematosus, diabetes mellitus (i.e., type 1 diabetes), and allogenic transplant rejection).

In specific embodiments, polypeptides, antibodies, or polynucleotides of the invention, and/or agonists or antagonists thereof, are useful to treat, diagnose, and/or prevent transplantation rejections, graft-versus-host disease, autoimmune and inflammatory diseases (e.g., immune complex-induced vasculitis, glomerulonephritis, hemolytic anemia, myasthenia gravis, type II collagen-induced arthritis, experimental allergic and hyperacute xenograft rejection, rheumatoid arthritis, and systemic lupus erythematosus (SLE). Organ rejection occurs by host immune cell destruction of the transplanted tissue through an immune response. Similarly, an immune response is also involved in GVHD, but, in this case, the foreign transplanted immune cells destroy the host tissues. Polypeptides, antibodies, or polynucleotides of the invention, and/or agonists or antagonists thereof, that inhibit an immune response, particularly the activation, proliferation, differentiation, or chemotaxis of T-cells, may be an effective therapy in preventing organ rejection or GVHD.

Similarly, polynucleotides, polypeptides, antibodies, and/or agonists or antagonists of the present invention may also be used to modulate and/or diagnose inflammation. For example, since polypeptides, antibodies, or polynucleotides of the invention, and/or agonists or antagonists of the invention may inhibit the activation, proliferation and/or differentiation of cells involved in an inflammatory response, these molecules can be used to treat, diagnose,

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or prognose, inflammatory conditions, both chronic and acute conditions, including, but not limited to, inflammation associated with infection (e.g., septic shock, sepsis, or systemic inflammatory response syndrome (SIRS)), ischemia-reperfusion injury, endotoxin lethality, arthritis, complement-mediated hyperacute rejection, nephritis, cytokine or chemokine induced lung injury, inflammatory bowel disease, Crohn's disease, and resulting from over  
5 production of cytokines (e.g., TNF or IL-1.).

Polypeptides, antibodies, polynucleotides and/or agonists or antagonists of the invention can be used to treat, detect, and/or prevent infectious agents. For example, by increasing the immune response, particularly increasing the proliferation activation and/or  
10 differentiation of B and/or T cells, infectious diseases may be treated, detected, and/or prevented. The immune response may be increased by either enhancing an existing immune response, or by initiating a new immune response. Alternatively, polynucleotides, polypeptides, antibodies, and/or agonists or antagonists of the present invention may also directly inhibit the infectious agent (refer to section of application listing infectious agents,  
15 etc), without necessarily eliciting an immune response.

Additional preferred embodiments of the invention include, but are not limited to, the use of polypeptides, antibodies, polynucleotides and/or agonists or antagonists in the following applications:

Administration to an animal (e.g., mouse, rat, rabbit, hamster, guinea pig, pigs, micro-  
20 pig, chicken, camel, goat, horse, cow, sheep, dog, cat, non-human primate, and human, most preferably human) to boost the immune system to produce increased quantities of one or more antibodies (e.g., IgG, IgA, IgM, and IgE), to induce higher affinity antibody production (e.g., IgG, IgA, IgM, and IgE), and/or to increase an immune response.

Administration to an animal (including, but not limited to, those listed above, and also  
25 including transgenic animals) incapable of producing functional endogenous antibody molecules or having an otherwise compromised endogenous immune system, but which is capable of producing human immunoglobulin molecules by means of a reconstituted or partially reconstituted immune system from another animal (see, e.g., published PCT Application Nos. WO98/24893, WO/9634096, WO/9633735, and WO/9110741.

30 A vaccine adjuvant that enhances immune responsiveness to specific antigen.

An adjuvant to enhance tumor-specific immune responses.

An adjuvant to enhance anti-viral immune responses. Anti-viral immune responses that may be enhanced using the compositions of the invention as an adjuvant, include virus and virus associated diseases or symptoms described herein or otherwise known in the art. In specific embodiments, the compositions of the invention are used as an adjuvant to enhance an immune response to a virus, disease, or symptom selected from the group consisting of: AIDS, meningitis, Dengue, EBV, and hepatitis (e.g., hepatitis B). In another specific embodiment, the compositions of the invention are used as an adjuvant to enhance an immune response to a virus, disease, or symptom selected from the group consisting of: HIV/AIDS, Respiratory syncytial virus, Dengue, Rotavirus, Japanese B encephalitis, Influenza A and B, Parainfluenza, Measles, Cytomegalovirus, Rabies, Junin, Chikungunya, Rift Valley fever, Herpes simplex, and yellow fever.

An adjuvant to enhance anti-bacterial or anti-fungal immune responses. Anti-bacterial or anti-fungal immune responses that may be enhanced using the compositions of the invention as an adjuvant, include bacteria or fungus and bacteria or fungus associated diseases or symptoms described herein or otherwise known in the art. In specific embodiments, the compositions of the invention are used as an adjuvant to enhance an immune response to a bacteria or fungus, disease, or symptom selected from the group consisting of: tetanus, Diphtheria, botulism, and meningitis type B. In another specific embodiment, the compositions of the invention are used as an adjuvant to enhance an immune response to a bacteria or fungus, disease, or symptom selected from the group consisting of: *Vibrio cholerae*, *Mycobacterium leprae*, *Salmonella typhi*, *Salmonella paratyphi*, *Meisseria meningitidis*, *Streptococcus pneumoniae*, Group B streptococcus, *Shigella spp.*, Enterotoxigenic *Escherichia coli*, Enterohemorrhagic *E. coli*, *Borrelia burgdorferi*, and Plasmodium (malaria).

An adjuvant to enhance anti-parasitic immune responses. Anti-parasitic immune responses that may be enhanced using the compositions of the invention as an adjuvant, include parasite and parasite associated diseases or symptoms described herein or otherwise known in the art. In specific embodiments, the compositions of the invention are used as an adjuvant to enhance an immune response to a parasite. In another specific embodiment, the compositions of the invention are used as an adjuvant to enhance an immune response to Plasmodium (malaria).

As a stimulator of B cell responsiveness to pathogens.

As an activator of T cells.

As an agent that elevates the immune status of an individual prior to their receipt of immunosuppressive therapies.

As an agent to induce higher affinity antibodies.

5 As an agent to increase serum immunoglobulin concentrations.

As an agent to accelerate recovery of immunocompromised individuals.

As an agent to boost immunoresponsiveness among aged populations.

As an immune system enhancer prior to, during, or after bone marrow transplant and/or other transplants (e.g., allogeneic or xenogeneic organ transplantation). With respect  
10 to transplantation, compositions of the invention may be administered prior to, concomitant with, and/or after transplantation. In a specific embodiment, compositions of the invention are administered after transplantation, prior to the beginning of recovery of T-cell populations. In another specific embodiment, compositions of the invention are first administered after transplantation after the beginning of recovery of T cell populations, but  
15 prior to full recovery of B cell populations.

As an agent to boost immunoresponsiveness among individuals having an acquired loss of B cell function. Conditions resulting in an acquired loss of B cell function that may be ameliorated or treated by administering the polypeptides, antibodies, polynucleotides and/or agonists or antagonists thereof, include, but are not limited to, HIV Infection, AIDS,  
20 bone marrow transplant, and B-cell chronic lymphocytic leukemia (CLL).

As an agent to boost immunoresponsiveness among individuals having a temporary immune deficiency. Conditions resulting in a temporary immune deficiency that may be ameliorated or treated by administering the polypeptides, antibodies, polynucleotides and/or agonists or antagonists thereof, include, but are not limited to, recovery from viral infections  
25 (e.g., influenza), conditions associated with malnutrition, recovery from infectious mononucleosis, or conditions associated with stress, recovery from measles, recovery from blood transfusion, recovery from surgery.

As a regulator of antigen presentation by monocytes, dendritic cells, and/or B-cells. In one embodiment, polynucleotides, polypeptides, antibodies, and/or agonists or antagonists  
30 of the present invention enhance antigen presentation or antagonizes antigen presentation in vitro or in vivo. Moreover, in related embodiments, said enhancement or antagonization of

antigen presentation may be useful as an anti- tumor treatment or to modulate the immune system.

As an agent to direct an individuals immune system towards development of a humoral response (i.e. TH2) as opposed to a TH1 cellular response.

5 As a means to induce tumor proliferation and thus make it more susceptible to anti-neoplastic agents. For example, multiple myeloma is a slowly dividing disease and is thus refractory to virtually all anti-neoplastic regimens. If these cells were forced to proliferate more rapidly their susceptibility profile would likely change.

10 As a stimulator of B cell production in pathologies such as AIDS, chronic lymphocyte disorder and/or Common Variable Immunodeficiency.

As a therapy for generation and/or regeneration of lymphoid tissues following surgery, trauma or genetic defect.

As a gene-based therapy for genetically inherited disorders resulting in immuno-incompetence such as observed among SCID patients.

15 As an antigen for the generation of antibodies to inhibit or enhance immune mediated responses against polypeptides of the invention.

As a means of activating T cells.

As a means of activating monocytes/macrophages to defend against parasitic diseases that effect monocytes such as Leshmania.

20 As pretreatment of bone marrow samples prior to transplant. Such treatment would increase B cell representation and thus accelerate recover.

As a means of regulating secreted cytokines that are elicited by polypeptides of the invention.

25 Additionally, polypeptides or polynucleotides of the invention, and/or agonists thereof, may be used to treat or prevent IgE-mediated allergic reactions. Such allergic reactions include, but are not limited to, asthma, rhinitis, and eczema.

All of the above described applications as they may apply to veterinary medicine.

30 Antagonists of the invention include, for example, binding and/or inhibitory antibodies, antisense nucleic acids, or ribozymes. These would be expected to reverse many of the activities of the ligand described above as well as find clinical or practical application as:



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A means of blocking various aspects of immune responses to foreign agents or self. Examples include autoimmune disorders such as lupus, and arthritis, as well as immunoresponsiveness to skin allergies, inflammation, bowel disease, injury and pathogens.

5 A therapy for preventing the B cell proliferation and Ig secretion associated with autoimmune diseases such as idiopathic thrombocytopenic purpura, systemic lupus erythramatosus and MS.

An inhibitor of B and/or T cell migration in endothelial cells. This activity disrupts tissue architecture or cognate responses and is useful, for example in disrupting immune responses, and blocking sepsis.

10 An inhibitor of graft versus host disease or transplant rejection.

A therapy for B cell and/or T cell malignancies such as ALL, Hodgkins disease, non-Hodgkins lymphoma, Chronic lymphocyte leukemia, plasmacytomas, multiple myeloma, Burkitt's lymphoma, and EBV-transformed diseases.

15 A therapy for chronic hypergammaglobulinemia evident in such diseases as monoclonal gammopathy of undetermined significance (MGUS), Waldenstrom's disease, related idiopathic monoclonal gammopathies, and plasmacytomas.

A therapy for decreasing cellular proliferation of Large B-cell Lymphomas.

A means of decreasing the involvement of B cells and Ig associated with Chronic Myelogenous Leukemia.

20 An immunosuppressive agent(s).

Polynucleotides, polypeptides, antibodies, and/or agonists or antagonists of the present invention may be used to modulate IgE concentrations in vitro or in vivo.

25 In another embodiment, administration of polypeptides, antibodies, polynucleotides and/or agonists or antagonists of the invention, may be used to treat or prevent IgE-mediated allergic reactions including, but not limited to, asthma, rhinitis, and eczema.

The agonists and antagonists may be employed in a composition with a pharmaceutically acceptable carrier, e.g., as described herein.

30 The agonists or antagonists may be employed for instance to inhibit polypeptide chemotaxis and activation of macrophages and their precursors, and of neutrophils, basophils, B lymphocytes and some T-cell subsets, e.g., activated and CD8 cytotoxic T cells and natural killer cells, in certain auto-immune and chronic inflammatory and infective diseases. Examples of autoimmune diseases are described herein and include multiple sclerosis, and

insulin-dependent diabetes. The antagonists or agonists may also be employed to treat infectious diseases including silicosis, sarcoidosis, idiopathic pulmonary fibrosis by, for example, preventing the recruitment and activation of mononuclear phagocytes. They may also be employed to treat idiopathic hyper-eosinophilic syndrome by, for example, preventing eosinophil production and migration. The antagonists or agonists or may also be employed for treating atherosclerosis, for example, by preventing monocyte infiltration in the artery wall.

Antibodies against polypeptides of the invention may be employed to treat ARDS.

Agonists and/or antagonists of the invention also have uses in stimulating wound and tissue repair, stimulating angiogenesis, stimulating the repair of vascular or lymphatic diseases or disorders. Additionally, agonists and antagonists of the invention may be used to stimulate the regeneration of mucosal surfaces.

In a specific embodiment, polynucleotides or polypeptides, and/or agonists thereof are used to treat or prevent a disorder characterized by primary or acquired immunodeficiency, deficient serum immunoglobulin production, recurrent infections, and/or immune system dysfunction. Moreover, polynucleotides or polypeptides, and/or agonists thereof may be used to treat or prevent infections of the joints, bones, skin, and/or parotid glands, blood-borne infections (e.g., sepsis, meningitis, septic arthritis, and/or osteomyelitis), autoimmune diseases (e.g., those disclosed herein), inflammatory disorders, and malignancies, and/or any disease or disorder or condition associated with these infections, diseases, disorders and/or malignancies) including, but not limited to, CVID, other primary immune deficiencies, HIV disease, CLL, recurrent bronchitis, sinusitis, otitis media, conjunctivitis, pneumonia, hepatitis, meningitis, herpes zoster (e.g., severe herpes zoster), and/or pneumocystis carinii.

In another embodiment, polynucleotides, polypeptides, antibodies, and/or agonists or antagonists of the present invention are used to treat, and/or diagnose an individual having common variable immunodeficiency disease ("CVID"; also known as "acquired agammaglobulinemia" and "acquired hypogammaglobulinemia") or a subset of this disease.

In a specific embodiment, polynucleotides, polypeptides, antibodies, and/or agonists or antagonists of the present invention may be used to treat, diagnose, and/or prevent (1) cancers or neoplasms and (2) autoimmune cell or tissue-related cancers or neoplasms. In a preferred embodiment, polynucleotides, polypeptides, antibodies, and/or agonists or

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antagonists of the present invention conjugated to a toxin or a radioactive isotope, as described herein, may be used to treat, diagnose, and/or prevent acute myelogeneous leukemia. In a further preferred embodiment, polynucleotides, polypeptides, antibodies, and/or agonists or antagonists of the present invention conjugated to a toxin or a radioactive isotope, as described herein, may be used to treat, diagnose, and/or prevent, chronic myelogeneous leukemia, multiple myeloma, non-Hodgkins lymphoma, and/or Hodgkins disease.

In another specific embodiment, polynucleotides, polypeptides, and/or agonists or antagonists of the invention may be used to treat, diagnose, prognose, and/or prevent selective IgA deficiency, myeloperoxidase deficiency, C2 deficiency, ataxia-telangiectasia, DiGeorge anomaly, common variable immunodeficiency (CVID), X-linked agammaglobulinemia, severe combined immunodeficiency (SCID), chronic granulomatous disease (CGD), and Wiskott-Aldrich syndrome.

Examples of autoimmune disorders that can be treated or detected are described above and also include, but are not limited to: Addison's Disease, hemolytic anemia, antiphospholipid syndrome, rheumatoid arthritis, dermatitis, allergic encephalomyelitis, glomerulonephritis, Goodpasture's Syndrome, Graves' Disease, Multiple Sclerosis, Myasthenia Gravis, Neuritis, Ophthalmia, Bullous Pemphigoid, Pemphigus, Polyendocrinopathies, Purpura, Reiter's Disease, Stiff-Man Syndrome, Autoimmune Thyroiditis, Systemic Lupus Erythematosus, Autoimmune Pulmonary Inflammation, Guillain-Barre Syndrome, insulin dependent diabetes mellitus, and autoimmune inflammatory eye disease.

Similarly, allergic reactions and conditions, such as asthma (particularly allergic asthma) or other respiratory problems, may also be treated by polynucleotides or polypeptides, or agonists or antagonists of the present invention. Moreover, these molecules can be used to treat anaphylaxis, hypersensitivity to an antigenic molecule, or blood group incompatibility.

Polynucleotides or polypeptides, or agonists or antagonists of the present invention may also be used to treat and/or prevent organ rejection or graft-versus-host disease (GVHD). Organ rejection occurs by host immune cell destruction of the transplanted tissue through an immune response. Similarly, an immune response is also involved in GVHD, but, in this case, the foreign transplanted immune cells destroy the host tissues. The administration of

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polynucleotides or polypeptides, or agonists or antagonists of the present invention that inhibits an immune response, particularly the proliferation, differentiation, or chemotaxis of T-cells, may be an effective therapy in preventing organ rejection or GVHD.

Similarly, polynucleotides or polypeptides, or agonists or antagonists of the present invention may also be used to modulate inflammation. For example, polynucleotides or polypeptides, or agonists or antagonists of the present invention may inhibit the proliferation and differentiation of cells involved in an inflammatory response. These molecules can be used to treat inflammatory conditions, both chronic and acute conditions, including chronic prostatitis, granulomatous prostatitis and malacoplakia, inflammation associated with infection (e.g., septic shock, sepsis, or systemic inflammatory response syndrome (SIRS)), ischemia-reperfusion injury, endotoxin lethality, arthritis, complement-mediated hyperacute rejection, nephritis, cytokine or chemokine induced lung injury, inflammatory bowel disease, Crohn's disease, or resulting from over production of cytokines (e.g., TNF or IL-1.)

In a preferred embodiment, the autoimmune diseases and disorders and/or conditions associated with the diseases and disorders recited above are treated, prognosed, prevented, and/or diagnosed using antibodies against the polypeptide of the invention.

As an agent to boost immunoresponsiveness among B cell immunodeficient individuals, such as, for example, an individual who has undergone a partial or complete splenectomy.

Additionally, polynucleotides, polypeptides, and/or antagonists of the invention may affect apoptosis, and therefore, would be useful in treating a number of diseases associated with increased cell survival or the inhibition of apoptosis. For example, diseases associated with increased cell survival or the inhibition of apoptosis that could be treated or detected by polynucleotides, polypeptides, and/or antagonists of the invention, include cancers (such as follicular lymphomas, carcinomas with p53 mutations, and hormone-dependent tumors, including, but not limited to colon cancer, cardiac tumors, pancreatic cancer, melanoma, retinoblastoma, glioblastoma, lung cancer, intestinal cancer, testicular cancer, stomach cancer, neuroblastoma, myxoma, myoma, lymphoma, endothelioma, osteoblastoma, osteoclastoma, osteosarcoma, chondrosarcoma, adenoma, breast cancer, prostate cancer, Kaposi's sarcoma and ovarian cancer); autoimmune disorders (such as, multiple sclerosis, Sjogren's syndrome, Hashimoto's thyroiditis, biliary cirrhosis, Behcet's disease, Crohn's disease, polymyositis, systemic lupus erythematosus and immune-related glomerulonephritis

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and rheumatoid arthritis) and viral infections (such as herpes viruses, pox viruses and adenoviruses), inflammation, graft v. host disease, acute graft rejection, and chronic graft rejection. In preferred embodiments, polynucleotides, polypeptides, and/or antagonists of the invention are used to inhibit growth, progression, and/or metastasis of cancers, in particular those listed above.

Additional diseases or conditions associated with increased cell survival that could be treated or detected by polynucleotides, polypeptides, and/or antagonists of the invention, include, but are not limited to, progression, and/or metastases of malignancies and related disorders such as leukemia (including acute leukemias (e.g., acute lymphocytic leukemia, acute myelocytic leukemia (including myeloblastic, promyelocytic, myelomonocytic, monocytic, and erythroleukemia)) and chronic leukemias (e.g., chronic myelocytic (granulocytic) leukemia and chronic lymphocytic leukemia)), polycythemia vera, lymphomas (e.g., Hodgkin's disease and non-Hodgkin's disease), multiple myeloma, Waldenstrom's macroglobulinemia, heavy chain disease, and solid tumors including, but not limited to, sarcomas and carcinomas such as fibrosarcoma, myxosarcoma, liposarcoma, chondrosarcoma, osteogenic sarcoma, chordoma, angiosarcoma, endotheliosarcoma, lymphangiosarcoma, lymphangioendotheliosarcoma, synovioma, mesothelioma, Ewing's tumor, leiomyosarcoma, rhabdomyosarcoma, colon carcinoma, pancreatic cancer, breast cancer, ovarian cancer, prostate cancer, squamous cell carcinoma, basal cell carcinoma, adenocarcinoma, sweat gland carcinoma, sebaceous gland carcinoma, papillary carcinoma, papillary adenocarcinomas, cystadenocarcinoma, medullary carcinoma, bronchogenic carcinoma, renal cell carcinoma, hepatoma, bile duct carcinoma, choriocarcinoma, seminoma, embryonal carcinoma, Wilm's tumor, cervical cancer, testicular tumor, lung carcinoma, small cell lung carcinoma, bladder carcinoma, epithelial carcinoma, glioma, astrocytoma, medulloblastoma, craniopharyngioma, ependymoma, pinealoma, hemangioblastoma, acoustic neuroma, oligodendroglioma, meningioma, melanoma, neuroblastoma, and retinoblastoma.

Diseases associated with increased apoptosis that could be treated or detected by polynucleotides, polypeptides, and/or antagonists of the invention, include AIDS; neurodegenerative disorders (such as Alzheimer's disease, Parkinson's disease, Amyotrophic lateral sclerosis, Retinitis pigmentosa, Cerebellar degeneration and brain tumor or prior associated disease); autoimmune disorders (such as, multiple sclerosis, Sjogren's syndrome,

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Hashimoto's thyroiditis, biliary cirrhosis, Behcet's disease, Crohn's disease, polymyositis, systemic lupus erythematosus and immune-related glomerulonephritis and rheumatoid arthritis) myelodysplastic syndromes (such as aplastic anemia), graft v. host disease, ischemic injury (such as that caused by myocardial infarction, stroke and reperfusion injury), liver injury (e.g., hepatitis related liver injury, ischemia/reperfusion injury, cholestasis (bile duct injury) and liver cancer); toxin-induced liver disease (such as that caused by alcohol), septic shock, cachexia and anorexia.

Hyperproliferative diseases and/or disorders that could be detected and/or treated by polynucleotides, polypeptides, and/or antagonists of the invention, include, but are not limited to neoplasms located in the: liver, abdomen, bone, breast, digestive system, pancreas, peritoneum, endocrine glands (adrenal, parathyroid, pituitary, testicles, ovary, thymus, thyroid), eye, head and neck, nervous (central and peripheral), lymphatic system, pelvic, skin, soft tissue, spleen, thoracic, and urogenital.

Similarly, other hyperproliferative disorders can also be treated or detected by polynucleotides, polypeptides, and/or antagonists of the invention. Examples of such hyperproliferative disorders include, but are not limited to: hypergammaglobulinemia, lymphoproliferative disorders, paraproteinemias, purpura, sarcoidosis, Sezary Syndrome, Waldenstrom's Macroglobulinemia, Gaucher's Disease, histiocytosis, and any other hyperproliferative disease, besides neoplasia, located in an organ system listed above.

#### **Hyperproliferative Disorders**

Polynucleotides or polypeptides, or agonists or antagonists of the present invention can be used to treat or detect hyperproliferative disorders, including neoplasms. Polynucleotides or polypeptides, or agonists or antagonists of the present invention may inhibit the proliferation of the disorder through direct or indirect interactions. Alternatively, Polynucleotides or polypeptides, or agonists or antagonists of the present invention may proliferate other cells which can inhibit the hyperproliferative disorder.

For example, by increasing an immune response, particularly increasing antigenic qualities of the hyperproliferative disorder or by proliferating, differentiating, or mobilizing T-cells, hyperproliferative disorders can be treated. This immune response may be increased by either enhancing an existing immune response, or by initiating a new immune response.

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Alternatively, decreasing an immune response may also be a method of treating hyperproliferative disorders, such as a chemotherapeutic agent.

Examples of hyperproliferative disorders that can be treated or detected by Polynucleotides or polypeptides, or agonists or antagonists of the present invention include, but are not limited to neoplasms located in the: colon, abdomen, bone, breast, digestive system, liver, pancreas, peritoneum, endocrine glands (adrenal, parathyroid, pituitary, testicles, ovary, thymus, thyroid), eye, head and neck, nervous (central and peripheral), lymphatic system, pelvic, skin, soft tissue, spleen, thoracic, and urogenital.

Similarly, other hyperproliferative disorders can also be treated or detected by polynucleotides or polypeptides, or agonists or antagonists of the present invention. Examples of such hyperproliferative disorders include, but are not limited to: hypergammaglobulinemia, lymphoproliferative disorders, paraproteinemias, purpura, sarcoidosis, Sezary Syndrome, Waldenstrom's Macroglobulinemia, Gaucher's Disease, histiocytosis, and any other hyperproliferative disease, besides neoplasia, located in an organ system listed above.

One preferred embodiment utilizes polynucleotides of the present invention to inhibit aberrant cellular division, by gene therapy using the present invention, and/or protein fusions or fragments thereof.

Thus, the present invention provides a method for treating cell proliferative disorders by inserting into an abnormally proliferating cell a polynucleotide of the present invention, wherein said polynucleotide represses said expression.

Another embodiment of the present invention provides a method of treating cell-proliferative disorders in individuals comprising administration of one or more active gene copies of the present invention to an abnormally proliferating cell or cells. In a preferred embodiment, polynucleotides of the present invention is a DNA construct comprising a recombinant expression vector effective in expressing a DNA sequence encoding said polynucleotides. In another preferred embodiment of the present invention, the DNA construct encoding the polynucleotides of the present invention is inserted into cells to be treated utilizing a retrovirus, or more preferably an adenoviral vector (See G J. Nabel, et. al., PNAS 1999 96: 324-326, which is hereby incorporated by reference). In a most preferred embodiment, the viral vector is defective and will not transform non-proliferating cells, only proliferating cells. Moreover, in a preferred embodiment, the polynucleotides of the present

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invention inserted into proliferating cells either alone, or in combination with or fused to other polynucleotides, can then be modulated via an external stimulus (i.e. magnetic, specific small molecule, chemical, or drug administration, etc.), which acts upon the promoter upstream of said polynucleotides to induce expression of the encoded protein product. As such the beneficial therapeutic affect of the present invention may be expressly modulated (i.e. to increase, decrease, or inhibit expression of the present invention) based upon said external stimulus.

Polynucleotides of the present invention may be useful in repressing expression of oncogenic genes or antigens. By "repressing expression of the oncogenic genes " is intended the suppression of the transcription of the gene, the degradation of the gene transcript (pre-message RNA), the inhibition of splicing, the destruction of the messenger RNA, the prevention of the post-translational modifications of the protein, the destruction of the protein, or the inhibition of the normal function of the protein.

For local administration to abnormally proliferating cells, polynucleotides of the present invention may be administered by any method known to those of skill in the art including, but not limited to transfection, electroporation, microinjection of cells, or in vehicles such as liposomes, lipofectin, or as naked polynucleotides, or any other method described throughout the specification. The polynucleotide of the present invention may be delivered by known gene delivery systems such as, but not limited to, retroviral vectors (Gilboa, J. Virology 44:845 (1982); Hocke, Nature 320:275 (1986); Wilson, et al., Proc. Natl. Acad. Sci. U.S.A. 85:3014), vaccinia virus system (Chakrabarty et al., Mol. Cell Biol. 5:3403 (1985) or other efficient DNA delivery systems (Yates et al., Nature 313:812 (1985)) known to those skilled in the art. These references are exemplary only and are hereby incorporated by reference. In order to specifically deliver or transfect cells which are abnormally proliferating and spare non-dividing cells, it is preferable to utilize a retrovirus, or adenoviral (as described in the art and elsewhere herein) delivery system known to those of skill in the art. Since host DNA replication is required for retroviral DNA to integrate and the retrovirus will be unable to self replicate due to the lack of the retrovirus genes needed for its life cycle. Utilizing such a retroviral delivery system for polynucleotides of the present invention will target said gene and constructs to abnormally proliferating cells and will spare the non-dividing normal cells.



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The polynucleotides of the present invention may be delivered directly to cell proliferative disorder/disease sites in internal organs, body cavities and the like by use of imaging devices used to guide an injecting needle directly to the disease site. The polynucleotides of the present invention may also be administered to disease sites at the time  
5 of surgical intervention.

By "cell proliferative disease" is meant any human or animal disease or disorder, affecting any one or any combination of organs, cavities, or body parts, which is characterized by single or multiple local abnormal proliferations of cells, groups of cells, or tissues, whether benign or malignant.

10 Any amount of the polynucleotides of the present invention may be administered as long as it has a biologically inhibiting effect on the proliferation of the treated cells. Moreover, it is possible to administer more than one of the polynucleotide of the present invention simultaneously to the same site. By "biologically inhibiting" is meant partial or total growth inhibition as well as decreases in the rate of proliferation or growth of the cells. The  
15 biologically inhibitory dose may be determined by assessing the effects of the polynucleotides of the present invention on target malignant or abnormally proliferating cell growth in tissue culture, tumor growth in animals and cell cultures, or any other method known to one of ordinary skill in the art.

The present invention is further directed to antibody-based therapies which involve  
20 administering of anti-polypeptides and anti-polynucleotide antibodies to a mammalian, preferably human, patient for treating one or more of the described disorders. Methods for producing anti-polypeptides and anti-polynucleotide antibodies polyclonal and monoclonal antibodies are described in detail elsewhere herein. Such antibodies may be provided in pharmaceutically acceptable compositions as known in the art or as described herein.

25 A summary of the ways in which the antibodies of the present invention may be used therapeutically includes binding polynucleotides or polypeptides of the present invention locally or systemically in the body or by direct cytotoxicity of the antibody, e.g. as mediated by complement (CDC) or by effector cells (ADCC). Some of these approaches are described in more detail below. Armed with the teachings provided herein, one of ordinary skill in the  
30 art will know how to use the antibodies of the present invention for diagnostic, monitoring or therapeutic purposes without undue experimentation.

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In particular, the antibodies, fragments and derivatives of the present invention are useful for treating a subject having or developing cell proliferative and/or differentiation disorders as described herein. Such treatment comprises administering a single or multiple doses of the antibody, or a fragment, derivative, or a conjugate thereof.

5       The antibodies of this invention may be advantageously utilized in combination with other monoclonal or chimeric antibodies, or with lymphokines or hematopoietic growth factors, for example., which serve to increase the number or activity of effector cells which interact with the antibodies.

It is preferred to use high affinity and/or potent in vivo inhibiting and/or neutralizing  
10       antibodies against polypeptides or polynucleotides of the present invention, fragments or regions thereof, for both immunoassays directed to and therapy of disorders related to polynucleotides or polypeptides, including fragments thereof, of the present invention. Such antibodies, fragments, or regions, will preferably have an affinity for polynucleotides or polypeptides, including fragments thereof. Preferred binding affinities include those with a  
15       dissociation constant or  $K_d$  less than  $5 \times 10^{-6}M$ ,  $10^{-6}M$ ,  $5 \times 10^{-7}M$ ,  $10^{-7}M$ ,  $5 \times 10^{-8}M$ ,  $10^{-8}M$ ,  $5 \times 10^{-9}M$ ,  $10^{-9}M$ ,  $5 \times 10^{-10}M$ ,  $10^{-10}M$ ,  $5 \times 10^{-11}M$ ,  $10^{-11}M$ ,  $5 \times 10^{-12}M$ ,  $10^{-12}M$ ,  $5 \times 10^{-13}M$ ,  $10^{-13}M$ ,  $5 \times 10^{-14}M$ ,  $10^{-14}M$ ,  $5 \times 10^{-15}M$ , and  $10^{-15}M$ .

Moreover, polypeptides of the present invention are useful in inhibiting the angiogenesis of proliferative cells or tissues, either alone, as a protein fusion, or in combination with other  
20       polypeptides directly or indirectly, as described elsewhere herein. In a most preferred embodiment, said anti-angiogenesis effect may be achieved indirectly, for example, through the inhibition of hematopoietic, tumor-specific cells, such as tumor-associated macrophages (See Joseph IB, et al. J Natl Cancer Inst, 90(21):1648-53 (1998), which is hereby incorporated by reference). Antibodies directed to polypeptides or polynucleotides of the  
25       present invention may also result in inhibition of angiogenesis directly, or indirectly (See Witte L, et al., Cancer Metastasis Rev. 17(2):155-61 (1998), which is hereby incorporated by reference)).

Polypeptides, including protein fusions, of the present invention, or fragments thereof may be useful in inhibiting proliferative cells or tissues through the induction of apoptosis.  
30       Said polypeptides may act either directly, or indirectly to induce apoptosis of proliferative cells and tissues, for example in the activation of a death-domain receptor, such as tumor necrosis factor (TNF) receptor-1, CD95 (Fas/APO-1), TNF-receptor-related apoptosis-

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mediated protein (TRAMP) and TNF-related apoptosis-inducing ligand (TRAIL) receptor-1 and -2 (See Schulze-Osthoff K, et.al., Eur J Biochem 254(3):439-59 (1998), which is hereby incorporated by reference). Moreover, in another preferred embodiment of the present invention, said polypeptides may induce apoptosis through other mechanisms, such as in the  
5 activation of other proteins which will activate apoptosis, or through stimulating the expression of said proteins, either alone or in combination with small molecule drugs or adjuvants, such as apoptonin, galectins, thioredoxins, antiinflammatory proteins (See for example, Mutat Res 400(1-2):447-55 (1998), Med Hypotheses 50(5):423-33 (1998), Chem Biol Interact. Apr 24;111-112:23-34 (1998), J Mol Med 76(6):402-12 (1998), Int J Tissue  
10 React;20(1):3-15 (1998), which are all hereby incorporated by reference).

Polypeptides, including protein fusions to, or fragments thereof, of the present invention are useful in inhibiting the metastasis of proliferative cells or tissues. Inhibition may occur as a direct result of administering polypeptides, or antibodies directed to said polypeptides as described elsewhere herein, or indirectly, such as activating the expression of  
15 proteins known to inhibit metastasis, for example alpha 4 integrins, (See, e.g., Curr Top Microbiol Immunol 1998;231:125-41, which is hereby incorporated by reference). Such therapeutic affects of the present invention may be achieved either alone, or in combination with small molecule drugs or adjuvants.

In another embodiment, the invention provides a method of delivering compositions  
20 containing the polypeptides of the invention (e.g., compositions containing polypeptides or polypeptide antibodies associated with heterologous polypeptides, heterologous nucleic acids, toxins, or prodrugs) to targeted cells expressing the polypeptide of the present invention. Polypeptides or polypeptide antibodies of the invention may be associated with with heterologous polypeptides, heterologous nucleic acids, toxins, or prodrugs via hydrophobic,  
25 hydrophilic, ionic and/or covalent interactions.

Polypeptides, protein fusions to, or fragments thereof, of the present invention are useful in enhancing the immunogenicity and/or antigenicity of proliferating cells or tissues, either directly, such as would occur if the polypeptides of the present invention 'vaccinated' the immune response to respond to proliferative antigens and immunogens, or indirectly,  
30 such as in activating the expression of proteins known to enhance the immune response (e.g. chemokines), to said antigens and immunogens.

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**Cardiovascular Disorders**

Polynucleotides or polypeptides, or agonists or antagonists of the present invention, may be used to treat cardiovascular disorders, including peripheral artery disease, such as limb ischemia.

5 Cardiovascular disorders include cardiovascular abnormalities, such as arterio-arterial fistula, arteriovenous fistula, cerebral arteriovenous malformations, congenital heart defects, pulmonary atresia, and Scimitar Syndrome. Congenital heart defects include aortic coarctation, cor triatriatum, coronary vessel anomalies, crisscross heart, dextrocardia, patent ductus arteriosus, Ebstein's anomaly, Eisenmenger complex, hypoplastic left heart syndrome, 10 levocardia, tetralogy of fallot, transposition of great vessels, double outlet right ventricle, tricuspid atresia, persistent truncus arteriosus, and heart septal defects, such as aortopulmonary septal defect, endocardial cushion defects, Lutembacher's Syndrome, trilogly of Fallot, ventricular heart septal defects.

Cardiovascular disorders also include heart disease, such as arrhythmias, carcinoid 15 heart disease, high cardiac output, low cardiac output, cardiac tamponade, endocarditis (including bacterial), heart aneurysm, cardiac arrest, congestive heart failure, congestive cardiomyopathy, paroxysmal dyspnea, cardiac edema, heart hypertrophy, congestive cardiomyopathy, left ventricular hypertrophy, right ventricular hypertrophy, post-infarction heart rupture, ventricular septal rupture, heart valve diseases, myocardial diseases, 20 myocardial ischemia, pericardial effusion, pericarditis (including constrictive and tuberculous), pneumopericardium, postpericardiotomy syndrome, pulmonary heart disease, rheumatic heart disease, ventricular dysfunction, hyperemia, cardiovascular pregnancy complications, Scimitar Syndrome, cardiovascular syphilis, and cardiovascular tuberculosis.

Arrhythmias include sinus arrhythmia, atrial fibrillation, atrial flutter, bradycardia, 25 extrasystole, Adams-Stokes Syndrome, bundle-branch block, sinoatrial block, long QT syndrome, parasystole, Lown-Ganong-Levine Syndrome, Mahaim-type pre-excitation syndrome, Wolff-Parkinson-White syndrome, sick sinus syndrome, tachycardias, and ventricular fibrillation. Tachycardias include paroxysmal tachycardia, supraventricular tachycardia, accelerated idioventricular rhythm, atrioventricular nodal reentry tachycardia, 30 ectopic atrial tachycardia, ectopic junctional tachycardia, sinoatrial nodal reentry tachycardia, sinus tachycardia, Torsades de Pointes, and ventricular tachycardia.

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Heart valve disease include aortic valve insufficiency, aortic valve stenosis, heart murmurs, aortic valve prolapse, mitral valve prolapse, tricuspid valve prolapse, mitral valve insufficiency, mitral valve stenosis, pulmonary atresia, pulmonary valve insufficiency, pulmonary valve stenosis, tricuspid atresia, tricuspid valve insufficiency, and tricuspid valve stenosis.

Myocardial diseases include alcoholic cardiomyopathy, congestive cardiomyopathy, hypertrophic cardiomyopathy, aortic subvalvular stenosis, pulmonary subvalvular stenosis, restrictive cardiomyopathy, Chagas cardiomyopathy, endocardial fibroelastosis, endomyocardial fibrosis, Kearns Syndrome, myocardial reperfusion injury, and myocarditis.

Myocardial ischemias include coronary disease, such as angina pectoris, coronary aneurysm, coronary arteriosclerosis, coronary thrombosis, coronary vasospasm, myocardial infarction and myocardial stunning.

Cardiovascular diseases also include vascular diseases such as aneurysms, angiodysplasia, angiomas, bacillary angiomas, Hippel-Lindau Disease, Klippel-Trenaunay-Weber Syndrome, Sturge-Weber Syndrome, angioneurotic edema, aortic diseases, Takayasu's Arteritis, aortitis, Leriche's Syndrome, arterial occlusive diseases, arteritis, enarteritis, polyarteritis nodosa, cerebrovascular disorders, diabetic angiopathies, diabetic retinopathy, embolisms, thrombosis, erythromelalgia, hemorrhoids, hepatic veno-occlusive disease, hypertension, hypotension, ischemia, peripheral vascular diseases, phlebitis, pulmonary veno-occlusive disease, Raynaud's disease, CREST syndrome, retinal vein occlusion, Scimitar syndrome, superior vena cava syndrome, telangiectasia, ataxia telangiectasia, hereditary hemorrhagic telangiectasia, varicocele, varicose veins, varicose ulcer, vasculitis, and venous insufficiency.

Aneurysms include dissecting aneurysms, false aneurysms, infected aneurysms, ruptured aneurysms, aortic aneurysms, cerebral aneurysms, coronary aneurysms, heart aneurysms, and iliac aneurysms.

Arterial occlusive diseases include arteriosclerosis, intermittent claudication, carotid stenosis, fibromuscular dysplasias, mesenteric vascular occlusion, Moyamoya disease, renal artery obstruction, retinal artery occlusion, and thromboangiitis obliterans.

Cerebrovascular disorders include carotid artery diseases, cerebral amyloid angiopathy, cerebral aneurysm, cerebral anoxia, cerebral arteriosclerosis, cerebral arteriovenous malformation, cerebral artery diseases, cerebral embolism and thrombosis,

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carotid artery thrombosis, sinus thrombosis, Wallenberg's syndrome, cerebral hemorrhage, epidural hematoma, subdural hematoma, subarachnoid hemorrhage, cerebral infarction, cerebral ischemia (including transient), subclavian steal syndrome, periventricular leukomalacia, vascular headache, cluster headache, migraine, and vertebrobasilar  
5 insufficiency.

Embolisms include air embolisms, amniotic fluid embolisms, cholesterol embolisms, blue toe syndrome, fat embolisms, pulmonary embolisms, and thromboembolisms. Thrombosis include coronary thrombosis, hepatic vein thrombosis, retinal vein occlusion, carotid artery thrombosis, sinus thrombosis, Wallenberg's syndrome, and thrombophlebitis.

10 Ischemia includes cerebral ischemia, ischemic colitis, compartment syndromes, anterior compartment syndrome, myocardial ischemia, reperfusion injuries, and peripheral limb ischemia. Vasculitis includes aortitis, arteritis, Behcet's Syndrome, Churg-Strauss Syndrome, mucocutaneous lymph node syndrome, thromboangiitis obliterans, hypersensitivity vasculitis, Schoenlein-Henoch purpura, allergic cutaneous vasculitis, and  
15 Wegener's granulomatosis.

Polynucleotides or polypeptides, or agonists or antagonists of the present invention, are especially effective for the treatment of critical limb ischemia and coronary disease.

Polypeptides may be administered using any method known in the art, including, but not limited to, direct needle injection at the delivery site, intravenous injection, topical  
20 administration, catheter infusion, biolistic injectors, particle accelerators, gelfoam sponge depots, other commercially available depot materials, osmotic pumps, oral or suppository solid pharmaceutical formulations, decanting or topical applications during surgery, aerosol delivery. Such methods are known in the art. Polypeptides may be administered as part of a Therapeutic, described in more detail below. Methods of delivering polynucleotides are  
25 described in more detail herein.

### **Anti-Angiogenesis Activity**

The naturally occurring balance between endogenous stimulators and inhibitors of angiogenesis is one in which inhibitory influences predominate. Rastinejad *et al.*, *Cell*  
30 56:345-355 (1989). In those rare instances in which neovascularization occurs under normal physiological conditions, such as wound healing, organ regeneration, embryonic development, and female reproductive processes, angiogenesis is stringently regulated and

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spatially and temporally delimited. Under conditions of pathological angiogenesis such as that characterizing solid tumor growth, these regulatory controls fail. Unregulated angiogenesis becomes pathologic and sustains progression of many neoplastic and non-neoplastic diseases. A number of serious diseases are dominated by abnormal neovascularization including solid tumor growth and metastases, arthritis, some types of eye disorders, and psoriasis. See, e.g., reviews by Moses *et al.*, *Biotech.* 9:630-634 (1991); Folkman *et al.*, *N. Engl. J. Med.*, 333:1757-1763 (1995); Auerbach *et al.*, *J. Microvasc. Res.* 29:401-411 (1985); Folkman, *Advances in Cancer Research*, eds. Klein and Weinhouse, Academic Press, New York, pp. 175-203 (1985); Patz, *Am. J. Ophthalmol.* 94:715-743 (1982); and Folkman *et al.*, *Science* 221:719-725 (1983). In a number of pathological conditions, the process of angiogenesis contributes to the disease state. For example, significant data have accumulated which suggest that the growth of solid tumors is dependent on angiogenesis. Folkman and Klagsbrun, *Science* 235:442-447 (1987).

The present invention provides for treatment of diseases or disorders associated with neovascularization by administration of the polynucleotides and/or polypeptides of the invention, as well as agonists or antagonists of the present invention. Malignant and metastatic conditions which can be treated with the polynucleotides and polypeptides, or agonists or antagonists of the invention include, but are not limited to, malignancies, solid tumors, and cancers described herein and otherwise known in the art (for a review of such disorders, see Fishman *et al.*, *Medicine*, 2d Ed., J. B. Lippincott Co., Philadelphia (1985)). Thus, the present invention provides a method of treating an angiogenesis-related disease and/or disorder, comprising administering to an individual in need thereof a therapeutically effective amount of a polynucleotide, polypeptide, antagonist and/or agonist of the invention. For example, polynucleotides, polypeptides, antagonists and/or agonists may be utilized in a variety of additional methods in order to therapeutically treat a cancer or tumor. Cancers which may be treated with polynucleotides, polypeptides, antagonists and/or agonists include, but are not limited to solid tumors, including prostate, lung, breast, ovarian, stomach, pancreas, larynx, esophagus, testes, liver, parotid, biliary tract, colon, rectum, cervix, uterus, endometrium, kidney, bladder, thyroid cancer; primary tumors and metastases; melanomas; glioblastoma; Kaposi's sarcoma; leiomyosarcoma; non-small cell lung cancer; colorectal cancer; advanced malignancies; and blood born tumors such as leukemias. For example, polynucleotides, polypeptides, antagonists and/or agonists may be delivered

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topically, in order to treat cancers such as skin cancer, head and neck tumors, breast tumors, and Kaposi's sarcoma.

Within yet other aspects, polynucleotides, polypeptides, antagonists and/or agonists may be utilized to treat superficial forms of bladder cancer by, for example, intravesical administration. Polynucleotides, polypeptides, antagonists and/or agonists may be delivered  
5 directly into the tumor, or near the tumor site, via injection or a catheter. Of course, as the artisan of ordinary skill will appreciate, the appropriate mode of administration will vary according to the cancer to be treated. Other modes of delivery are discussed herein.

Polynucleotides, polypeptides, antagonists and/or agonists may be useful in treating  
10 other disorders, besides cancers, which involve angiogenesis. These disorders include, but are not limited to: benign tumors, for example hemangiomas, acoustic neuromas, neurofibromas, trachomas, and pyogenic granulomas; arteriosclerotic plaques; ocular angiogenic diseases, for example, diabetic retinopathy, retinopathy of prematurity, macular degeneration, corneal graft rejection, neovascular glaucoma, retrolental fibroplasia, rubeosis,  
15 retinoblastoma, uveitis and Pterygia (abnormal blood vessel growth) of the eye; rheumatoid arthritis; psoriasis; delayed wound healing; endometriosis; vasculogenesis; granulations; hypertrophic scars (keloids); nonunion fractures; scleroderma; trachoma; vascular adhesions; myocardial angiogenesis; coronary collaterals; cerebral collaterals; arteriovenous malformations; ischemic limb angiogenesis; Osler-Webber Syndrome; plaque  
20 neovascularization; telangiectasia; hemophilic joints; angiofibroma; fibromuscular dysplasia; wound granulation; Crohn's disease; and atherosclerosis.

For example, within one aspect of the present invention methods are provided for treating hypertrophic scars and keloids, comprising the step of administering a polynucleotide, polypeptide, antagonist and/or agonist of the invention to a hypertrophic scar  
25 or keloid.

Within one embodiment of the present invention polynucleotides, polypeptides, antagonists and/or agonists are directly injected into a hypertrophic scar or keloid, in order to prevent the progression of these lesions. This therapy is of particular value in the prophylactic treatment of conditions which are known to result in the development of  
30 hypertrophic scars and keloids (e.g., burns), and is preferably initiated after the proliferative phase has had time to progress (approximately 14 days after the initial injury), but before hypertrophic scar or keloid development. As noted above, the present invention also



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provides methods for treating neovascular diseases of the eye, including for example, corneal neovascularization, neovascular glaucoma, proliferative diabetic retinopathy, retrolental fibroplasia and macular degeneration.

Moreover, Ocular disorders associated with neovascularization which can be treated with the polynucleotides and polypeptides of the present invention (including agonists and/or antagonists) include, but are not limited to: neovascular glaucoma, diabetic retinopathy, retinoblastoma, retrolental fibroplasia, uveitis, retinopathy of prematurity macular degeneration, corneal graft neovascularization, as well as other eye inflammatory diseases, ocular tumors and diseases associated with choroidal or iris neovascularization. See, e.g., reviews by Waltman *et al.*, *Am. J. Ophthalmol.* 85:704-710 (1978) and Gartner *et al.*, *Surv. Ophthalmol.* 22:291-312 (1978).

Thus, within one aspect of the present invention methods are provided for treating neovascular diseases of the eye such as corneal neovascularization (including corneal graft neovascularization), comprising the step of administering to a patient a therapeutically effective amount of a compound (as described above) to the cornea, such that the formation of blood vessels is inhibited. Briefly, the cornea is a tissue which normally lacks blood vessels. In certain pathological conditions however, capillaries may extend into the cornea from the pericorneal vascular plexus of the limbus. When the cornea becomes vascularized, it also becomes clouded, resulting in a decline in the patient's visual acuity. Visual loss may become complete if the cornea completely opacitates. A wide variety of disorders can result in corneal neovascularization, including for example, corneal infections (e.g., trachoma, herpes simplex keratitis, leishmaniasis and onchocerciasis), immunological processes (e.g., graft rejection and Stevens-Johnson's syndrome), alkali burns, trauma, inflammation (of any cause), toxic and nutritional deficiency states, and as a complication of wearing contact lenses.

Within particularly preferred embodiments of the invention, may be prepared for topical administration in saline (combined with any of the preservatives and antimicrobial agents commonly used in ocular preparations), and administered in eyedrop form. The solution or suspension may be prepared in its pure form and administered several times daily. Alternatively, anti-angiogenic compositions, prepared as described above, may also be administered directly to the cornea. Within preferred embodiments, the anti-angiogenic composition is prepared with a muco-adhesive polymer which binds to cornea. Within

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further embodiments, the anti-angiogenic factors or anti-angiogenic compositions may be utilized as an adjunct to conventional steroid therapy. Topical therapy may also be useful prophylactically in corneal lesions which are known to have a high probability of inducing an angiogenic response (such as chemical burns). In these instances the treatment, likely in  
5 combination with steroids, may be instituted immediately to help prevent subsequent complications.

Within other embodiments, the compounds described above may be injected directly into the corneal stroma by an ophthalmologist under microscopic guidance. The preferred site of injection may vary with the morphology of the individual lesion, but the goal of the  
10 administration would be to place the composition at the advancing front of the vasculature (i.e., interspersed between the blood vessels and the normal cornea). In most cases this would involve perilimbic corneal injection to "protect" the cornea from the advancing blood vessels. This method may also be utilized shortly after a corneal insult in order to prophylactically prevent corneal neovascularization. In this situation the material could be  
15 injected in the perilimbic cornea interspersed between the corneal lesion and its undesired potential limbic blood supply. Such methods may also be utilized in a similar fashion to prevent capillary invasion of transplanted corneas. In a sustained-release form injections might only be required 2-3 times per year. A steroid could also be added to the injection solution to reduce inflammation resulting from the injection itself.

20 Within another aspect of the present invention, methods are provided for treating neovascular glaucoma, comprising the step of administering to a patient a therapeutically effective amount of a polynucleotide, polypeptide, antagonist and/or agonist to the eye, such that the formation of blood vessels is inhibited. In one embodiment, the compound may be administered topically to the eye in order to treat early forms of neovascular glaucoma.  
25 Within other embodiments, the compound may be implanted by injection into the region of the anterior chamber angle. Within other embodiments, the compound may also be placed in any location such that the compound is continuously released into the aqueous humor. Within another aspect of the present invention, methods are provided for treating proliferative diabetic retinopathy, comprising the step of administering to a patient a  
30 therapeutically effective amount of a polynucleotide, polypeptide, antagonist and/or agonist to the eyes, such that the formation of blood vessels is inhibited.

Within particularly preferred embodiments of the invention, proliferative diabetic

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retinopathy may be treated by injection into the aqueous humor or the vitreous, in order to increase the local concentration of the polynucleotide, polypeptide, antagonist and/or agonist in the retina. Preferably, this treatment should be initiated prior to the acquisition of severe disease requiring photocoagulation.

5        Within another aspect of the present invention, methods are provided for treating retrolental fibroplasia, comprising the step of administering to a patient a therapeutically effective amount of a polynucleotide, polypeptide, antagonist and/or agonist to the eye, such that the formation of blood vessels is inhibited. The compound may be administered topically, via intravitreal injection and/or via intraocular implants.

10        Additionally, disorders which can be treated with the polynucleotides, polypeptides, agonists and/or antagonists include, but are not limited to, hemangioma, arthritis, psoriasis, angiofibroma, atherosclerotic plaques, delayed wound healing, granulations, hemophilic joints, hypertrophic scars, nonunion fractures, Osler-Weber syndrome, pyogenic granuloma, scleroderma, trachoma, and vascular adhesions.

15        Moreover, disorders and/or states, which can be treated with the the polynucleotides, polypeptides, agonists and/or antagonists include, but are not limited to, solid tumors, blood born tumors such as leukemias, tumor metastasis, Kaposi's sarcoma, benign tumors, for example hemangiomas, acoustic neuromas, neurofibromas, trachomas, and pyogenic granulomas, rheumatoid arthritis, psoriasis, ocular angiogenic diseases, for  
20        example, diabetic retinopathy, retinopathy of prematurity, macular degeneration, corneal graft rejection, neovascular glaucoma, retrolental fibroplasia, rubeosis, retinoblastoma, and uveitis, delayed wound healing, endometriosis, vasculogenesis, granulations, hypertrophic scars (keloids), nonunion fractures, scleroderma, trachoma, vascular adhesions, myocardial angiogenesis, coronary collaterals, cerebral collaterals, arteriovenous malformations,  
25        ischemic limb angiogenesis, Osler-Webber Syndrome, plaque neovascularization, telangiectasia, hemophilic joints, angiofibroma fibromuscular dysplasia, wound granulation, Crohn's disease, atherosclerosis, birth control agent by preventing vascularization required for embryo implantation controlling menstruation, diseases that have angiogenesis as a pathologic consequence such as cat scratch disease (Rochele minalia quintosa), ulcers  
30        (Helicobacter pylori), Bartonellosis and bacillary angiomatosis.

In one aspect of the birth control method, an amount of the compound sufficient to block embryo implantation is administered before or after intercourse and fertilization have

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occurred, thus providing an effective method of birth control, possibly a "morning after" method. Polynucleotides, polypeptides, agonists and/or agonists may also be used in controlling menstruation or administered as either a peritoneal lavage fluid or for peritoneal implantation in the treatment of endometriosis.

5 Polynucleotides, polypeptides, agonists and/or agonists of the present invention may be incorporated into surgical sutures in order to prevent stitch granulomas.

Polynucleotides, polypeptides, agonists and/or agonists may be utilized in a wide variety of surgical procedures. For example, within one aspect of the present invention a compositions (in the form of, for example, a spray or film) may be utilized to coat or spray an  
10 area prior to removal of a tumor, in order to isolate normal surrounding tissues from malignant tissue, and/or to prevent the spread of disease to surrounding tissues. Within other aspects of the present invention, compositions (e.g., in the form of a spray) may be delivered via endoscopic procedures in order to coat tumors, or inhibit angiogenesis in a desired locale. Within yet other aspects of the present invention, surgical meshes which have been coated  
15 with anti- angiogenic compositions of the present invention may be utilized in any procedure wherein a surgical mesh might be utilized. For example, within one embodiment of the invention a surgical mesh laden with an anti-angiogenic composition may be utilized during abdominal cancer resection surgery (e.g., subsequent to colon resection) in order to provide support to the structure, and to release an amount of the anti-angiogenic factor.

20 Within further aspects of the present invention, methods are provided for treating tumor excision sites, comprising administering a polynucleotide, polypeptide, agonist and/or agonist to the resection margins of a tumor subsequent to excision, such that the local recurrence of cancer and the formation of new blood vessels at the site is inhibited. Within one embodiment of the invention, the anti-angiogenic compound is administered directly to the  
25 tumor excision site (e.g., applied by swabbing, brushing or otherwise coating the resection margins of the tumor with the anti-angiogenic compound). Alternatively, the anti-angiogenic compounds may be incorporated into known surgical pastes prior to administration. Within particularly preferred embodiments of the invention, the anti-angiogenic compounds are applied after hepatic resections for malignancy, and after neurosurgical operations.

30 Within one aspect of the present invention, polynucleotides, polypeptides, agonists and/or agonists may be administered to the resection margin of a wide variety of tumors, including for example, breast, colon, brain and hepatic tumors. For example, within one

embodiment of the invention, anti-angiogenic compounds may be administered to the site of a neurological tumor subsequent to excision, such that the formation of new blood vessels at the site are inhibited.

The polynucleotides, polypeptides, agonists and/or agonists of the present invention may also be administered along with other anti-angiogenic factors. Representative examples of other anti-angiogenic factors include: Anti-Invasive Factor, retinoic acid and derivatives thereof, paclitaxel, Suramin, Tissue Inhibitor of Metalloproteinase-1, Tissue Inhibitor of Metalloproteinase-2, Plasminogen Activator Inhibitor-1, Plasminogen Activator Inhibitor-2, and various forms of the lighter "d group" transition metals.

Lighter "d group" transition metals include, for example, vanadium, molybdenum, tungsten, titanium, niobium, and tantalum species. Such transition metal species may form transition metal complexes. Suitable complexes of the above-mentioned transition metal species include oxo transition metal complexes.

Representative examples of vanadium complexes include oxo vanadium complexes such as vanadate and vanadyl complexes. Suitable vanadate complexes include metavanadate and orthovanadate complexes such as, for example, ammonium metavanadate, sodium metavanadate, and sodium orthovanadate. Suitable vanadyl complexes include, for example, vanadyl acetylacetonate and vanadyl sulfate including vanadyl sulfate hydrates such as vanadyl sulfate mono- and trihydrates.

Representative examples of tungsten and molybdenum complexes also include oxo complexes. Suitable oxo tungsten complexes include tungstate and tungsten oxide complexes. Suitable tungstate complexes include ammonium tungstate, calcium tungstate, sodium tungstate dihydrate, and tungstic acid. Suitable tungsten oxides include tungsten (IV) oxide and tungsten (VI) oxide. Suitable oxo molybdenum complexes include molybdate, molybdenum oxide, and molybdenyl complexes. Suitable molybdate complexes include ammonium molybdate and its hydrates, sodium molybdate and its hydrates, and potassium molybdate and its hydrates. Suitable molybdenum oxides include molybdenum (VI) oxide, molybdenum (VI) oxide, and molybdic acid. Suitable molybdenyl complexes include, for example, molybdenyl acetylacetonate. Other suitable tungsten and molybdenum complexes include hydroxo derivatives derived from, for example, glycerol, tartaric acid, and sugars.

A wide variety of other anti-angiogenic factors may also be utilized within the context of the present invention. Representative examples include platelet factor 4; protamine

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sulphate; sulphated chitin derivatives (prepared from queen crab shells), (Murata et al., Cancer Res. 51:22-26, 1991); Sulphated Polysaccharide Peptidoglycan Complex (SP-PG) (the function of this compound may be enhanced by the presence of steroids such as estrogen, and tamoxifen citrate); Staurosporine; modulators of matrix metabolism, including  
5 for example, proline analogs, cishydroxyproline, d,L-3,4-dehydroproline, Thiaproline, alpha,alpha-dipyridyl, aminopropionitrile fumarate; 4-propyl-5-(4-pyridinyl)-2(3H)-oxazolone; Methotrexate; Mitoxantrone; Heparin; Interferons; 2 Macroglobulin-serum; ChIMP-3 (Pavloff et al., J. Bio. Chem. 267:17321-17326, 1992); Chymostatin (Tomkinson et al., Biochem J. 286:475-480, 1992); Cyclodextrin Tetradecasulfate; Eponemycin;  
10 Camptothecin; Fumagillin (Ingber et al., Nature 348:555-557, 1990); Gold Sodium Thiomalate ("GST"; Matsubara and Ziff, J. Clin. Invest. 79:1440-1446, 1987); anticollagenase-serum; alpha2-antiplasmin (Holmes et al., J. Biol. Chem. 262(4):1659-1664, 1987); Bisantrone (National Cancer Institute); Lobenzarit disodium (N-(2)-carboxyphenyl-4-chloroanthronilic acid disodium or "CCA"; Takeuchi et al., Agents Actions 36:312-316,  
15 1992); Thalidomide; Angostatic steroid; AGM-1470; carboxynaminolmidazole; and metalloproteinase inhibitors such as BB94.

#### **Diseases at the Cellular Level**

Diseases associated with increased cell survival or the inhibition of apoptosis that  
20 could be treated or detected by polynucleotides or polypeptides, as well as antagonists or agonists of the present invention, include cancers (such as follicular lymphomas, carcinomas with p53 mutations, and hormone-dependent tumors, including, but not limited to colon cancer, cardiac tumors, pancreatic cancer, melanoma, retinoblastoma, glioblastoma, lung cancer, intestinal cancer, testicular cancer, stomach cancer, neuroblastoma, myxoma, myoma,  
25 lymphoma, endothelioma, osteoblastoma, osteoclastoma, osteosarcoma, chondrosarcoma, adenoma, breast cancer, prostate cancer, Kaposi's sarcoma and ovarian cancer); autoimmune disorders (such as, multiple sclerosis, Sjogren's syndrome, Hashimoto's thyroiditis, biliary cirrhosis, Behcet's disease, Crohn's disease, polymyositis, systemic lupus erythematosus and immune-related glomerulonephritis and rheumatoid arthritis) and viral infections (such as  
30 herpes viruses, pox viruses and adenoviruses), inflammation, graft v. host disease, acute graft rejection, and chronic graft rejection. In preferred embodiments, polynucleotides,

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polypeptides, and/or antagonists of the invention are used to inhibit growth, progression, and/or metasis of cancers, in particular those listed above.

Additional diseases or conditions associated with increased cell survival that could be treated or detected by polynucleotides or polypeptides, or agonists or antagonists of the present invention include, but are not limited to, progression, and/or metastases of malignancies and related disorders such as leukemia (including acute leukemias (e.g., acute lymphocytic leukemia, acute myelocytic leukemia (including myeloblastic, promyelocytic, myelomonocytic, monocytic, and erythroleukemia)) and chronic leukemias (e.g., chronic myelocytic (granulocytic) leukemia and chronic lymphocytic leukemia)), polycythemia vera, lymphomas (e.g., Hodgkin's disease and non-Hodgkin's disease), multiple myeloma, Waldenstrom's macroglobulinemia, heavy chain disease, and solid tumors including, but not limited to, sarcomas and carcinomas such as fibrosarcoma, myxosarcoma, liposarcoma, chondrosarcoma, osteogenic sarcoma, chordoma, angiosarcoma, endotheliosarcoma, lymphangiosarcoma, lymphangioendotheliosarcoma, synovioma, mesothelioma, Ewing's tumor, leiomyosarcoma, rhabdomyosarcoma, colon carcinoma, pancreatic cancer, breast cancer, ovarian cancer, prostate cancer, squamous cell carcinoma, basal cell carcinoma, adenocarcinoma, sweat gland carcinoma, sebaceous gland carcinoma, papillary carcinoma, papillary adenocarcinomas, cystadenocarcinoma, medullary carcinoma, bronchogenic carcinoma, renal cell carcinoma, hepatoma, bile duct carcinoma, choriocarcinoma, seminoma, embryonal carcinoma, Wilm's tumor, cervical cancer, testicular tumor, lung carcinoma, small cell lung carcinoma, bladder carcinoma, epithelial carcinoma, glioma, astrocytoma, medulloblastoma, craniopharyngioma, ependymoma, pinealoma, hemangioblastoma, acoustic neuroma, oligodendroglioma, menangioma, melanoma, neuroblastoma, and retinoblastoma.

Diseases associated with increased apoptosis that could be treated or detected by polynucleotides or polypeptides, as well as agonists or antagonists of the present invention, include AIDS; neurodegenerative disorders (such as Alzheimer's disease, Parkinson's disease, Amyotrophic lateral sclerosis, Retinitis pigmentosa, Cerebellar degeneration and brain tumor or prior associated disease); autoimmune disorders (such as, multiple sclerosis, Sjogren's syndrome, Hashimoto's thyroiditis, biliary cirrhosis, Behcet's disease, Crohn's disease, polymyositis, systemic lupus erythematosus and immune-related glomerulonephritis and rheumatoid arthritis) myelodysplastic syndromes (such as aplastic anemia), graft v. host

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disease, ischemic injury (such as that caused by myocardial infarction, stroke and reperfusion injury), liver injury (e.g., hepatitis related liver injury, ischemia/reperfusion injury, cholestosis (bile duct injury) and liver cancer); toxin-induced liver disease (such as that caused by alcohol), septic shock, cachexia and anorexia.

5

### **Wound Healing and Epithelial Cell Proliferation**

In accordance with yet a further aspect of the present invention, there is provided a process for utilizing polynucleotides or polypeptides, as well as agonists or antagonists of the present invention, for therapeutic purposes, for example, to stimulate epithelial cell proliferation and basal keratinocytes for the purpose of wound healing, and to stimulate hair follicle production and healing of dermal wounds. Polynucleotides or polypeptides, as well as agonists or antagonists of the present invention, may be clinically useful in stimulating wound healing including surgical wounds, excisional wounds, deep wounds involving damage of the dermis and epidermis, eye tissue wounds, dental tissue wounds, oral cavity wounds, diabetic ulcers, dermal ulcers, cubitus ulcers, arterial ulcers, venous stasis ulcers, burns resulting from heat exposure or chemicals, and other abnormal wound healing conditions such as uremia, malnutrition, vitamin deficiencies and complications associated with systemic treatment with steroids, radiation therapy and antineoplastic drugs and antimetabolites. Polynucleotides or polypeptides, as well as agonists or antagonists of the present invention, could be used to promote dermal reestablishment subsequent to dermal loss

Polynucleotides or polypeptides, as well as agonists or antagonists of the present invention, could be used to increase the adherence of skin grafts to a wound bed and to stimulate re-epithelialization from the wound bed. The following are types of grafts that polynucleotides or polypeptides, agonists or antagonists of the present invention, could be used to increase adherence to a wound bed: autografts, artificial skin, allografts, autodermic graft, autoepdermic grafts, avacular grafts, Blair-Brown grafts, bone graft, brephoplastic grafts, cutis graft, delayed graft, dermic graft, epidermic graft, fascia graft, full thickness graft, heterologous graft, xenograft, homologous graft, hyperplastic graft, lamellar graft, mesh graft, mucosal graft, Ollier-Thiersch graft, omenpal graft, patch graft, pedicle graft, penetrating graft, split skin graft, thick split graft. Polynucleotides or polypeptides, as well as



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agonists or antagonists of the present invention, can be used to promote skin strength and to improve the appearance of aged skin.

It is believed that polynucleotides or polypeptides, as well as agonists or antagonists of the present invention, will also produce changes in hepatocyte proliferation, and epithelial cell proliferation in the lung, breast, pancreas, stomach, small intestine, and large intestine. Polynucleotides or polypeptides, as well as agonists or antagonists of the present invention, could promote proliferation of epithelial cells such as sebocytes, hair follicles, hepatocytes, type II pneumocytes, mucin-producing goblet cells, and other epithelial cells and their progenitors contained within the skin, lung, liver, and gastrointestinal tract. Polynucleotides or polypeptides, agonists or antagonists of the present invention, may promote proliferation of endothelial cells, keratinocytes, and basal keratinocytes.

Polynucleotides or polypeptides, as well as agonists or antagonists of the present invention, could also be used to reduce the side effects of gut toxicity that result from radiation, chemotherapy treatments or viral infections. Polynucleotides or polypeptides, as well as agonists or antagonists of the present invention, may have a cytoprotective effect on the small intestine mucosa. Polynucleotides or polypeptides, as well as agonists or antagonists of the present invention, may also stimulate healing of mucositis (mouth ulcers) that result from chemotherapy and viral infections.

Polynucleotides or polypeptides, as well as agonists or antagonists of the present invention, could further be used in full regeneration of skin in full and partial thickness skin defects, including burns, (i.e., repopulation of hair follicles, sweat glands, and sebaceous glands), treatment of other skin defects such as psoriasis. Polynucleotides or polypeptides, as well as agonists or antagonists of the present invention, could be used to treat epidermolysis bullosa, a defect in adherence of the epidermis to the underlying dermis which results in frequent, open and painful blisters by accelerating reepithelialization of these lesions. Polynucleotides or polypeptides, as well as agonists or antagonists of the present invention, could also be used to treat gastric and duodenal ulcers and help heal by scar formation of the mucosal lining and regeneration of glandular mucosa and duodenal mucosal lining more rapidly. Inflammatory bowel diseases, such as Crohn's disease and ulcerative colitis, are diseases which result in destruction of the mucosal surface of the small or large intestine, respectively. Thus, polynucleotides or polypeptides, as well as agonists or antagonists of the present invention, could be used to promote the resurfacing of the mucosal surface to aid

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more rapid healing and to prevent progression of inflammatory bowel disease. Treatment with polynucleotides or polypeptides, agonists or antagonists of the present invention, is expected to have a significant effect on the production of mucus throughout the gastrointestinal tract and could be used to protect the intestinal mucosa from injurious substances that are ingested or following surgery. Polynucleotides or polypeptides, as well as agonists or antagonists of the present invention, could be used to treat diseases associated with the under expression.

Moreover, polynucleotides or polypeptides, as well as agonists or antagonists of the present invention, could be used to prevent and heal damage to the lungs due to various pathological states. Polynucleotides or polypeptides, as well as agonists or antagonists of the present invention, which could stimulate proliferation and differentiation and promote the repair of alveoli and bronchiolar epithelium to prevent or treat acute or chronic lung damage. For example, emphysema, which results in the progressive loss of alveoli, and inhalation injuries, i.e., resulting from smoke inhalation and burns, that cause necrosis of the bronchiolar epithelium and alveoli could be effectively treated using polynucleotides or polypeptides, agonists or antagonists of the present invention. Also, polynucleotides or polypeptides, as well as agonists or antagonists of the present invention, could be used to stimulate the proliferation of and differentiation of type II pneumocytes, which may help treat or prevent disease such as hyaline membrane diseases, such as infant respiratory distress syndrome and bronchopulmonary dysplasia, in premature infants.

Polynucleotides or polypeptides, as well as agonists or antagonists of the present invention, could stimulate the proliferation and differentiation of hepatocytes and, thus, could be used to alleviate or treat liver diseases and pathologies such as fulminant liver failure caused by cirrhosis, liver damage caused by viral hepatitis and toxic substances (i.e., acetaminophen, carbon tetrachloride and other hepatotoxins known in the art).

In addition, polynucleotides or polypeptides, as well as agonists or antagonists of the present invention, could be used to treat or prevent the onset of diabetes mellitus. In patients with newly diagnosed Types I and II diabetes, where some islet cell function remains, polynucleotides or polypeptides, as well as agonists or antagonists of the present invention, could be used to maintain the islet function so as to alleviate, delay or prevent permanent manifestation of the disease. Also, polynucleotides or polypeptides, as well as agonists or

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antagonists of the present invention, could be used as an auxiliary in islet cell transplantation to improve or promote islet cell function.

### **Neural Activity and Neurological Diseases**

5       The polynucleotides, polypeptides and agonists or antagonists of the invention may be used for the diagnosis and/or treatment of diseases, disorders, damage or injury of the brain and/or nervous system. Nervous system disorders that can be treated with the compositions of the invention (e.g., polypeptides, polynucleotides, and/or agonists or antagonists), include, but are not limited to, nervous system injuries, and diseases or disorders which result in either  
10 a disconnection of axons, a diminution or degeneration of neurons, or demyelination. Nervous system lesions which may be treated in a patient (including human and non-human mammalian patients) according to the methods of the invention, include but are not limited to, the following lesions of either the central (including spinal cord, brain) or peripheral nervous systems: (1) ischemic lesions, in which a lack of oxygen in a portion of the nervous  
15 system results in neuronal injury or death, including cerebral infarction or ischemia, or spinal cord infarction or ischemia; (2) traumatic lesions, including lesions caused by physical injury or associated with surgery, for example, lesions which sever a portion of the nervous system, or compression injuries; (3) malignant lesions, in which a portion of the nervous system is destroyed or injured by malignant tissue which is either a nervous system  
20 associated malignancy or a malignancy derived from non-nervous system tissue; (4) infectious lesions, in which a portion of the nervous system is destroyed or injured as a result of infection, for example, by an abscess or associated with infection by human immunodeficiency virus, herpes zoster, or herpes simplex virus or with Lyme disease, tuberculosis, or syphilis; (5) degenerative lesions, in which a portion of the nervous system  
25 is destroyed or injured as a result of a degenerative process including but not limited to, degeneration associated with Parkinson's disease, Alzheimer's disease, Huntington's chorea, or amyotrophic lateral sclerosis (ALS); (6) lesions associated with nutritional diseases or disorders, in which a portion of the nervous system is destroyed or injured by a nutritional disorder or disorder of metabolism including, but not limited to, vitamin B12 deficiency, folic acid deficiency, Wernicke disease, tobacco-alcohol amblyopia, Marchiafava-Bignami disease  
30 (primary degeneration of the corpus callosum), and alcoholic cerebellar degeneration; (7) neurological lesions associated with systemic diseases including, but not limited to, diabetes

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(diabetic neuropathy, Bell's palsy), systemic lupus erythematosus, carcinoma, or sarcoidosis; (8) lesions caused by toxic substances including alcohol, lead, or particular neurotoxins; and (9) demyelinated lesions in which a portion of the nervous system is destroyed or injured by a demyelinating disease including, but not limited to, multiple sclerosis, human immunodeficiency virus-associated myelopathy, transverse myelopathy or various etiologies, progressive multifocal leukoencephalopathy, and central pontine myelinolysis.

In one embodiment, the polypeptides, polynucleotides, or agonists or antagonists of the invention are used to protect neural cells from the damaging effects of hypoxia. In a further preferred embodiment, the polypeptides, polynucleotides, or agonists or antagonists of the invention are used to protect neural cells from the damaging effects of cerebral hypoxia. According to this embodiment, the compositions of the invention are used to treat or prevent neural cell injury associated with cerebral hypoxia. In one non-exclusive aspect of this embodiment, the polypeptides, polynucleotides, or agonists or antagonists of the invention, are used to treat or prevent neural cell injury associated with cerebral ischemia. In another non-exclusive aspect of this embodiment, the polypeptides, polynucleotides, or agonists or antagonists of the invention are used to treat or prevent neural cell injury associated with cerebral infarction.

In another preferred embodiment, the polypeptides, polynucleotides, or agonists or antagonists of the invention are used to treat or prevent neural cell injury associated with a stroke. In a specific embodiment, the polypeptides, polynucleotides, or agonists or antagonists of the invention are used to treat or prevent cerebral neural cell injury associated with a stroke.

In another preferred embodiment, the polypeptides, polynucleotides, or agonists or antagonists of the invention are used to treat or prevent neural cell injury associated with a heart attack. In a specific embodiment, the polypeptides, polynucleotides, or agonists or antagonists of the invention are used to treat or prevent cerebral neural cell injury associated with a heart attack.

The compositions of the invention which are useful for treating or preventing a nervous system disorder may be selected by testing for biological activity in promoting the survival or differentiation of neurons. For example, and not by way of limitation, compositions of the invention which elicit any of the following effects may be useful

according to the invention: (1) increased survival time of neurons in culture either in the presence or absence of hypoxia or hypoxic conditions; (2) increased sprouting of neurons in culture or *in vivo*; (3) increased production of a neuron-associated molecule in culture or *in vivo*, e.g., choline acetyltransferase or acetylcholinesterase with respect to motor neurons; or  
5 (4) decreased symptoms of neuron dysfunction *in vivo*. Such effects may be measured by any method known in the art. In preferred, non-limiting embodiments, increased survival of neurons may routinely be measured using a method set forth herein or otherwise known in the art, such as, for example, in Zhang *et al.*, *Proc Natl Acad Sci USA* 97:3637-42 (2000) or in Arakawa *et al.*, *J. Neurosci.*, 10:3507-15 (1990); increased sprouting of neurons may be  
10 detected by methods known in the art, such as, for example, the methods set forth in Pestronk *et al.*, *Exp. Neurol.*, 70:65-82 (1980), or Brown *et al.*, *Ann. Rev. Neurosci.*, 4:17-42 (1981); increased production of neuron-associated molecules may be measured by bioassay, enzymatic assay, antibody binding, Northern blot assay, etc., using techniques known in the art and depending on the molecule to be measured; and motor neuron dysfunction may be  
15 measured by assessing the physical manifestation of motor neuron disorder, e.g., weakness, motor neuron conduction velocity, or functional disability.

In specific embodiments, motor neuron disorders that may be treated according to the invention include, but are not limited to, disorders such as infarction, infection, exposure to toxin, trauma, surgical damage, degenerative disease or malignancy that may affect motor  
20 neurons as well as other components of the nervous system, as well as disorders that selectively affect neurons such as amyotrophic lateral sclerosis, and including, but not limited to, progressive spinal muscular atrophy, progressive bulbar palsy, primary lateral sclerosis, infantile and juvenile muscular atrophy, progressive bulbar paralysis of childhood (Fazio-Londe syndrome), poliomyelitis and the post polio syndrome, and Hereditary Motorsensory  
25 Neuropathy (Charcot-Marie-Tooth Disease).

Further, polypeptides or polynucleotides of the invention may play a role in neuronal survival; synapse formation; conductance; neural differentiation, etc. Thus, compositions of the invention (including polynucleotides, polypeptides, and agonists or antagonists) may be used to diagnose and/or treat or prevent diseases or disorders associated with these roles,  
30 including, but not limited to, learning and/or cognition disorders. The compositions of the invention may also be useful in the treatment or prevention of neurodegenerative disease states and/or behavioural disorders. Such neurodegenerative disease states and/or behavioral

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disorders include, but are not limited to, Alzheimers Disease, Parkinsons Disease, Huntingtons Disease, Tourette Syndrome, schizophrenia, mania, dementia, paranoia, obsessive compulsive disorder, panic disorder, learning disabilities, ALS, psychoses, autism, and altered behaviors, including disorders in feeding, sleep patterns, balance, and perception.

5 In addition, compositions of the invention may also play a role in the treatment, prevention and/or detection of developmental disorders associated with the developing embryo, or sexually-linked disorders.

Additionally, polypeptides, polynucleotides and/or agonists or antagonists of the invention, may be useful in protecting neural cells from diseases, damage, disorders, or  
10 injury, associated with cerebrovascular disorders including, but not limited to, carotid artery diseases (e.g., carotid artery thrombosis, carotid stenosis, or Moyamoya Disease), cerebral amyloid angiopathy, cerebral aneurysm, cerebral anoxia, cerebral arteriosclerosis, cerebral arteriovenous malformations, cerebral artery diseases, cerebral embolism and thrombosis (e.g., carotid artery thrombosis, sinus thrombosis, or Wallenberg's Syndrome), cerebral  
15 hemorrhage (e.g., epidural or subdural hematoma, or subarachnoid hemorrhage), cerebral infarction, cerebral ischemia (e.g., transient cerebral ischemia, Subclavian Steal Syndrome, or vertebrobasilar insufficiency), vascular dementia (e.g., multi-infarct), leukomalacia, periventricular, and vascular headache (e.g., cluster headache or migraines).

In accordance with yet a further aspect of the present invention, there is provided a  
20 process for utilizing polynucleotides or polypeptides, as well as agonists or antagonists of the present invention, for therapeutic purposes, for example, to stimulate neurological cell proliferation and/or differentiation. Therefore, polynucleotides, polypeptides, agonists and/or antagonists of the invention may be used to treat and/or detect neurologic diseases. Moreover, polynucleotides or polypeptides, or agonists or antagonists of the invention, can  
25 be used as a marker or detector of a particular nervous system disease or disorder.

Examples of neurologic diseases which can be treated or detected with polynucleotides, polypeptides, agonists, and/or antagonists of the present invention include brain diseases, such as metabolic brain diseases which includes phenylketonuria such as maternal phenylketonuria, pyruvate carboxylase deficiency, pyruvate dehydrogenase  
30 complex deficiency, Wernicke's Encephalopathy, brain edema, brain neoplasms such as cerebellar neoplasms which include infratentorial neoplasms, cerebral ventricle neoplasms such as choroid plexus neoplasms, hypothalamic neoplasms, supratentorial neoplasms,

2014

canavan disease, cerebellar diseases such as cerebellar ataxia which include spinocerebellar degeneration such as ataxia telangiectasia, cerebellar dyssynergia, Friederich's Ataxia, Machado-Joseph Disease, olivopontocerebellar atrophy, cerebellar neoplasms such as infratentorial neoplasms, diffuse cerebral sclerosis such as encephalitis periaxialis, globoid cell leukodystrophy, metachromatic leukodystrophy and subacute sclerosing panencephalitis.

Additional neurologic diseases which can be treated or detected with polynucleotides, polypeptides, agonists, and/or antagonists of the present invention include cerebrovascular disorders (such as carotid artery diseases which include carotid artery thrombosis, carotid stenosis and Moyamoya Disease), cerebral amyloid angiopathy, cerebral aneurysm, cerebral anoxia, cerebral arteriosclerosis, cerebral arteriovenous malformations, cerebral artery diseases, cerebral embolism and thrombosis such as carotid artery thrombosis, sinus thrombosis and Wallenberg's Syndrome, cerebral hemorrhage such as epidural hematoma, subdural hematoma and subarachnoid hemorrhage, cerebral infarction, cerebral ischemia such as transient cerebral ischemia, Subclavian Steal Syndrome and vertebrobasilar insufficiency, vascular dementia such as multi-infarct dementia, periventricular leukomalacia, vascular headache such as cluster headache and migraine.

Additional neurologic diseases which can be treated or detected with polynucleotides, polypeptides, agonists, and/or antagonists of the present invention include dementia such as AIDS Dementia Complex, presenile dementia such as Alzheimer's Disease and Creutzfeldt-Jakob Syndrome, senile dementia such as Alzheimer's Disease and progressive supranuclear palsy, vascular dementia such as multi-infarct dementia, encephalitis which include encephalitis periaxialis, viral encephalitis such as epidemic encephalitis, Japanese Encephalitis, St. Louis Encephalitis, tick-borne encephalitis and West Nile Fever, acute disseminated encephalomyelitis, meningoencephalitis such as uveomeningoencephalitic syndrome, Postencephalitic Parkinson Disease and subacute sclerosing panencephalitis, encephalomalacia such as periventricular leukomalacia, epilepsy such as generalized epilepsy which includes infantile spasms, absence epilepsy, myoclonic epilepsy which includes MERRF Syndrome, tonic-clonic epilepsy, partial epilepsy such as complex partial epilepsy, frontal lobe epilepsy and temporal lobe epilepsy, post-traumatic epilepsy, status epilepticus such as Epilepsia Partialis Continua, and Hallervorden-Spatz Syndrome.

2015

Additional neurologic diseases which can be treated or detected with polynucleotides, polypeptides, agonists, and/or antagonists of the present invention include hydrocephalus such as Dandy-Walker Syndrome and normal pressure hydrocephalus, hypothalamic diseases such as hypothalamic neoplasms, cerebral malaria, narcolepsy which  
5 includes cataplexy, bulbar poliomyelitis, cerebri pseudotumor, Rett Syndrome, Reye's Syndrome, thalamic diseases, cerebral toxoplasmosis, intracranial tuberculoma and Zellweger Syndrome, central nervous system infections such as AIDS Dementia Complex, Brain Abscess, subdural empyema, encephalomyelitis such as Equine Encephalomyelitis, Venezuelan Equine Encephalomyelitis, Necrotizing Hemorrhagic Encephalomyelitis, Visna,  
10 and cerebral malaria.

Additional neurologic diseases which can be treated or detected with polynucleotides, polypeptides, agonists, and/or antagonists of the present invention include meningitis such as arachnoiditis, aseptic meningitis such as viral meningitis which includes lymphocytic choriomeningitis, Bacterial meningitis which includes Haemophilus Meningitis, Listeria  
15 Meningitis, Meningococcal Meningitis such as Waterhouse-Friderichsen Syndrome, Pneumococcal Meningitis and meningeal tuberculosis, fungal meningitis such as Cryptococcal Meningitis, subdural effusion, meningoencephalitis such as uvemeningoencephalitic syndrome, myelitis such as transverse myelitis, neurosyphilis such as tabes dorsalis, poliomyelitis which includes bulbar poliomyelitis and postpoliomyelitis  
20 syndrome, prion diseases (such as Creutzfeldt-Jakob Syndrome, Bovine Spongiform Encephalopathy, Gerstmann-Straussler Syndrome, Kuru, Scrapie), and cerebral toxoplasmosis.

Additional neurologic diseases which can be treated or detected with polynucleotides, polypeptides, agonists, and/or antagonists of the present invention include central nervous  
25 system neoplasms such as brain neoplasms that include cerebellar neoplasms such as infratentorial neoplasms, cerebral ventricle neoplasms such as choroid plexus neoplasms, hypothalamic neoplasms and supratentorial neoplasms, meningeal neoplasms, spinal cord neoplasms which include epidural neoplasms, demyelinating diseases such as Canavan Diseases, diffuse cerebral scleritis which includes adrenoleukodystrophy, encephalitis  
30 periaxialis, globoid cell leukodystrophy, diffuse cerebral sclerosis such as metachromatic leukodystrophy, allergic encephalomyelitis, necrotizing hemorrhagic encephalomyelitis, progressive multifocal leukoencephalopathy, multiple sclerosis, central pontine myelinolysis,



2016

transverse myelitis, neuromyelitis optica, Scrapie, Swayback, Chronic Fatigue Syndrome, Visna, High Pressure Nervous Syndrome, Meningism, spinal cord diseases such as amyotonia congenita, amyotrophic lateral sclerosis, spinal muscular atrophy such as Werdnig-Hoffmann Disease, spinal cord compression, spinal cord neoplasms such as  
5 epidural neoplasms, syringomyelia, Tabes Dorsalis, Stiff-Man Syndrome, mental retardation such as Angelman Syndrome, Cri-du-Chat Syndrome, De Lange's Syndrome, Down Syndrome, Gangliosidoses such as gangliosidoses G(M1), Sandhoff Disease, Tay-Sachs Disease, Hartnup Disease, homocystinuria, Laurence-Moon-Biedl Syndrome, Lesch-Nyhan Syndrome, Maple Syrup Urine Disease, mucopolipidosis such as fucosidosis, neuronal ceroid-  
10 lipofuscinosis, oculocerebrorenal syndrome, phenylketonuria such as maternal phenylketonuria, Prader-Willi Syndrome, Rett Syndrome, Rubinstein-Taybi Syndrome, Tuberous Sclerosis, WAGR Syndrome, nervous system abnormalities such as holoprosencephaly, neural tube defects such as anencephaly which includes hydrangencephaly, Arnold-Chiari Deformity, encephalocele, meningocele,  
15 meningomyelocele, spinal dysraphism such as spina bifida cystica and spina bifida occulta.

Additional neurologic diseases which can be treated or detected with polynucleotides, polypeptides, agonists, and/or antagonists of the present invention include hereditary motor and sensory neuropathies which include Charcot-Marie Disease, Hereditary optic atrophy, Refsum's Disease, hereditary spastic paraplegia, Werdnig-Hoffmann Disease, Hereditary  
20 Sensory and Autonomic Neuropathies such as Congenital Analgesia and Familial Dysautonomia, Neurologic manifestations (such as agnosia that include Gerstmann's Syndrome, Amnesia such as retrograde amnesia, apraxia, neurogenic bladder, cataplexy, communicative disorders such as hearing disorders that includes deafness, partial hearing loss, loudness recruitment and tinnitus, language disorders such as aphasia which include  
25 agraphia, anomia, broca aphasia, and Wernicke Aphasia, Dyslexia such as Acquired Dyslexia, language development disorders, speech disorders such as aphasia which includes anomia, broca aphasia and Wernicke Aphasia, articulation disorders, communicative disorders such as speech disorders which include dysarthria, echolalia, mutism and stuttering, voice disorders such as aphonia and hoarseness, decerebrate state, delirium, fasciculation,  
30 hallucinations, meningism, movement disorders such as angelman syndrome, ataxia, athetosis, chorea, dystonia, hypokinesia, muscle hypotonia, myoclonus, tic, torticollis and tremor, muscle hypertonia such as muscle rigidity such as stiff-man syndrome, muscle

2017

spasticity, paralysis such as facial paralysis which includes Herpes Zoster Oticus, Gastroparesis, Hemiplegia, ophthalmoplegia such as diplopia, Duane's Syndrome, Horner's Syndrome, Chronic progressive external ophthalmoplegia such as Kearns Syndrome, Bulbar Paralysis, Tropical Spastic Paraparesis, Paraplegia such as Brown-Sequard Syndrome, 5 quadriplegia, respiratory paralysis and vocal cord paralysis, paresis, phantom limb, taste disorders such as ageusia and dysgeusia, vision disorders such as amblyopia, blindness, color vision defects, diplopia, hemianopsia, scotoma and subnormal vision, sleep disorders such as hypersomnia which includes Kleine-Levin Syndrome, insomnia, and somnambulism, spasm such as trismus, unconsciousness such as coma, persistent vegetative state and syncope and 10 vertigo, neuromuscular diseases such as amyotonia congenita, amyotrophic lateral sclerosis, Lambert-Eaton Myasthenic Syndrome, motor neuron disease, muscular atrophy such as spinal muscular atrophy, Charcot-Marie Disease and Werdnig-Hoffmann Disease, Postpoliomyelitis Syndrome, Muscular Dystrophy, Myasthenia Gravis, Myotonia Atrophica, Myotonia Confenita, Nemaline Myopathy, Familial Periodic Paralysis, Multiplex 15 Paramyoclonus, Tropical Spastic Paraparesis and Stiff-Man Syndrome, peripheral nervous system diseases such as acrodynia, amyloid neuropathies, autonomic nervous system diseases such as Adie's Syndrome, Barre-Lieou Syndrome, Familial Dysautonomia, Horner's Syndrome, Reflex Sympathetic Dystrophy and Shy-Drager Syndrome, Cranial Nerve Diseases such as Acoustic Nerve Diseases such as Acoustic Neuroma which includes 20 Neurofibromatosis 2, Facial Nerve Diseases such as Facial Neuralgia, Melkersson-Rosenthal Syndrome, ocular motility disorders which includes amblyopia, nystagmus, oculomotor nerve paralysis, ophthalmoplegia such as Duane's Syndrome, Horner's Syndrome, Chronic Progressive External Ophthalmoplegia which includes Kearns Syndrome, Strabismus such as Esotropia and Exotropia, Oculomotor Nerve Paralysis, Optic Nerve Diseases such as Optic 25 Atrophy which includes Hereditary Optic Atrophy, Optic Disk Drusen, Optic Neuritis such as Neuromyelitis Optica, Papilledema, Trigeminal Neuralgia, Vocal Cord Paralysis, Demyelinating Diseases such as Neuromyelitis Optica and Swayback, and Diabetic neuropathies such as diabetic foot.

Additional neurologic diseases which can be treated or detected with polynucleotides, 30 polypeptides, agonists, and/or antagonists of the present invention include nerve compression syndromes such as carpal tunnel syndrome, tarsal tunnel syndrome, thoracic outlet syndrome such as cervical rib syndrome, ulnar nerve compression syndrome, neuralgia such as

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causalgia, cervico-brachial neuralgia, facial neuralgia and trigeminal neuralgia, neuritis such as experimental allergic neuritis, optic neuritis, polyneuritis, polyradiculoneuritis and radiculities such as polyradiculitis, hereditary motor and sensory neuropathies such as Charcot-Marie Disease, Hereditary Optic Atrophy, Refsum's Disease, Hereditary Spastic Paraplegia and Werdnig-Hoffmann Disease, Hereditary Sensory and Autonomic Neuropathies which include Congenital Analgesia and Familial Dysautonomia, POEMS Syndrome, Sciatica, Gustatory Sweating and Tetany).

#### 10 **Infectious Disease**

Polynucleotides or polypeptides, as well as agonists or antagonists of the present invention can be used to treat or detect infectious agents. For example, by increasing the immune response, particularly increasing the proliferation and differentiation of B and/or T cells, infectious diseases may be treated. The immune response may be increased by either enhancing an existing immune response, or by initiating a new immune response. Alternatively, polynucleotides or polypeptides, as well as agonists or antagonists of the present invention may also directly inhibit the infectious agent, without necessarily eliciting an immune response.

Viruses are one example of an infectious agent that can cause disease or symptoms that can be treated or detected by a polynucleotide or polypeptide and/or agonist or antagonist of the present invention. Examples of viruses, include, but are not limited to Examples of viruses, include, but are not limited to the following DNA and RNA viruses and viral families: Arbovirus, Adenoviridae, Arenaviridae, Arterivirus, Birnaviridae, Bunyaviridae, Caliciviridae, Circoviridae, Coronaviridae, Dengue, EBV, HIV, Flaviviridae, Hepadnaviridae (Hepatitis), Herpesviridae (such as, Cytomegalovirus, Herpes Simplex, Herpes Zoster), Mononegavirus (e.g., Paramyxoviridae, Morbillivirus, Rhabdoviridae), Orthomyxoviridae (e.g., Influenza A, Influenza B, and parainfluenza), Papiloma virus, Papovaviridae, Parvoviridae, Picornaviridae, Poxviridae (such as Smallpox or Vaccinia), Reoviridae (e.g., Rotavirus), Retroviridae (HTLV-I, HTLV-II, Lentivirus), and Togaviridae (e.g., Rubivirus). Viruses falling within these families can cause a variety of diseases or symptoms, including, but not limited to: arthritis, bronchiolitis, respiratory syncytial virus, encephalitis, eye infections (e.g., conjunctivitis, keratitis), chronic fatigue syndrome, hepatitis (A, B, C, E,

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Chronic Active, Delta), Japanese B encephalitis, Junin, Chikungunya, Rift Valley fever, yellow fever, meningitis, opportunistic infections (e.g., AIDS), pneumonia, Burkitt's Lymphoma, chickenpox, hemorrhagic fever, Measles, Mumps, Parainfluenza, Rabies, the common cold, Polio, leukemia, Rubella, sexually transmitted diseases, skin diseases (e.g., Kaposi's, warts), and viremia. polynucleotides or polypeptides, or agonists or antagonists of the invention, can be used to treat or detect any of these symptoms or diseases. In specific embodiments, polynucleotides, polypeptides, or agonists or antagonists of the invention are used to treat: meningitis, Dengue, EBV, and/or hepatitis (e.g., hepatitis B). In an additional specific embodiment polynucleotides, polypeptides, or agonists or antagonists of the invention are used to treat patients nonresponsive to one or more other commercially available hepatitis vaccines. In a further specific embodiment polynucleotides, polypeptides, or agonists or antagonists of the invention are used to treat AIDS.

Similarly, bacterial or fungal agents that can cause disease or symptoms and that can be treated or detected by a polynucleotide or polypeptide and/or agonist or antagonist of the present invention include, but not limited to, include, but not limited to, the following Gram-Negative and Gram-positive bacteria and bacterial families and fungi: Actinomycetales (e.g., Corynebacterium, Mycobacterium, Norcardia), Cryptococcus neoformans, Aspergillosis, Bacillaceae (e.g., Anthrax, Clostridium), Bacteroidaceae, Blastomycosis, Bordetella, Borrelia (e.g., Borrelia burgdorferi, Brucellosis, Candidiasis, Campylobacter, Coccidioidomycosis, Cryptococcosis, Dermatocycoses, E. coli (e.g., Enterotoxigenic E. coli and Enterohemorrhagic E. coli), Enterobacteriaceae (Klebsiella, Salmonella (e.g., Salmonella typhi, and Salmonella paratyphi), Serratia, Yersinia), Erysipelothrix, Helicobacter, Legionellosis, Leptospirosis, Listeria, Mycoplasmatales, Mycobacterium leprae, Vibrio cholerae, Neisseriaceae (e.g., Acinetobacter, Gonorrhea, Meningococcal), Meisseria meningitidis, Pasteurellacea Infections (e.g., Actinobacillus, Heamophilus (e.g., Heamophilus influenza type B), Pasteurella), Pseudomonas, Rickettsiaceae, Chlamydiaceae, Syphilis, Shigella spp., Staphylococcal, Meningiococcal, Pneumococcal and Streptococcal (e.g., Streptococcus pneumoniae and Group B Streptococcus). These bacterial or fungal families can cause the following diseases or symptoms, including, but not limited to: bacteremia, endocarditis, eye infections (conjunctivitis, tuberculosis, uveitis), gingivitis, opportunistic infections (e.g., AIDS related infections), paronychia, prosthesis-related infections, Reiter's Disease, respiratory tract infections, such as Whooping Cough or Empyema, sepsis, Lyme

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Disease, Cat-Scratch Disease, Dysentery, Paratyphoid Fever, food poisoning, Typhoid, pneumonia, Gonorrhea, meningitis (e.g., meningitis types A and B), Chlamydia, Syphilis, Diphtheria, Leprosy, Paratuberculosis, Tuberculosis, Lupus, Botulism, gangrene, tetanus, impetigo, Rheumatic Fever, Scarlet Fever, sexually transmitted diseases, skin diseases (e.g.,  
5 cellulitis, dermatocycoses), toxemia, urinary tract infections, wound infections. Polynucleotides or polypeptides, agonists or antagonists of the invention, can be used to treat or detect any of these symptoms or diseases. In specific embodiments, Polynucleotides, polypeptides, agonists or antagonists of the invention are used to treat: tetanus, Diphtheria, botulism, and/or meningitis type B.

10 Moreover, parasitic agents causing disease or symptoms that can be treated or detected by a polynucleotide or polypeptide and/or agonist or antagonist of the present invention include, but not limited to, the following families or class: Amebiasis, Babesiosis, Coccidiosis, Cryptosporidiosis, Dientamoebiasis, Dourine, Ectoparasitic, Giardiasis, Helminthiasis, Leishmaniasis, Theileriasis, Toxoplasmosis, Trypanosomiasis, and  
15 Trichomonas and Sporozoans (e.g., Plasmodium virax, Plasmodium falciparum, Plasmodium malariae and Plasmodium ovale). These parasites can cause a variety of diseases or symptoms, including, but not limited to: Scabies, Trombiculiasis, eye infections, intestinal disease (e.g., dysentery, giardiasis), liver disease, lung disease, opportunistic infections (e.g., AIDS related), malaria, pregnancy complications, and toxoplasmosis.  
20 polynucleotides or polypeptides, or agonists or antagonists of the invention, can be used to treat or detect any of these symptoms or diseases.

Polynucleotides or polypeptides, as well as agonists or antagonists of the present invention of the present invention could either be by administering an effective amount of a polypeptide to the patient, or by removing cells from the patient, supplying the cells with a  
25 polynucleotide of the present invention, and returning the engineered cells to the patient (ex vivo therapy). Moreover, the polypeptide or polynucleotide of the present invention can be used as an antigen in a vaccine to raise an immune response against infectious disease.

### **Regeneration**

30 Polynucleotides or polypeptides, as well as agonists or antagonists of the present invention can be used to differentiate, proliferate, and attract cells, leading to the regeneration of tissues. (See, Science 276:59-87 (1997).) The regeneration of tissues could be used to

repair, replace, or protect tissue damaged by congenital defects, trauma (wounds, burns, incisions, or ulcers), age, disease (e.g. osteoporosis, osteoarthritis, periodontal disease, liver failure), surgery, including cosmetic plastic surgery, fibrosis, reperfusion injury, or systemic cytokine damage.

5           Tissues that could be regenerated using the present invention include organs (e.g., pancreas, liver, intestine, kidney, skin, endothelium), muscle (smooth, skeletal or cardiac), vasculature (including vascular and lymphatics), nervous, hematopoietic, and skeletal (bone, cartilage, tendon, and ligament) tissue. Preferably, regeneration occurs without or decreased scarring. Regeneration also may include angiogenesis.

10           Moreover, polynucleotides or polypeptides, as well as agonists or antagonists of the present invention, may increase regeneration of tissues difficult to heal. For example, increased tendon/ligament regeneration would quicken recovery time after damage. Polynucleotides or polypeptides, as well as agonists or antagonists of the present invention could also be used prophylactically in an effort to avoid damage. Specific diseases that could  
15 be treated include of tendinitis, carpal tunnel syndrome, and other tendon or ligament defects. A further example of tissue regeneration of non-healing wounds includes pressure ulcers, ulcers associated with vascular insufficiency, surgical, and traumatic wounds.

            Similarly, nerve and brain tissue could also be regenerated by using polynucleotides or polypeptides, as well as agonists or antagonists of the present invention, to proliferate and  
20 differentiate nerve cells. Diseases that could be treated using this method include central and peripheral nervous system diseases, neuropathies, or mechanical and traumatic disorders (e.g., spinal cord disorders, head trauma, cerebrovascular disease, and stroke). Specifically, diseases associated with peripheral nerve injuries, peripheral neuropathy (e.g., resulting from chemotherapy or other medical therapies), localized neuropathies, and central nervous system  
25 diseases (e.g., Alzheimer's disease, Parkinson's disease, Huntington's disease, amyotrophic lateral sclerosis, and Shy-Drager syndrome), could all be treated using the polynucleotides or polypeptides, as well as agonists or antagonists of the present invention.

### **Chemotaxis**

30           Polynucleotides or polypeptides, as well as agonists or antagonists of the present invention may have chemotaxis activity. A chemotactic molecule attracts or mobilizes cells (e.g., monocytes, fibroblasts, neutrophils, T-cells, mast cells, eosinophils, epithelial and/or

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endothelial cells) to a particular site in the body, such as inflammation, infection, or site of hyperproliferation. The mobilized cells can then fight off and/or heal the particular trauma or abnormality.

Polynucleotides or polypeptides, as well as agonists or antagonists of the present invention may increase chemotactic activity of particular cells. These chemotactic molecules can then be used to treat inflammation, infection, hyperproliferative disorders, or any immune system disorder by increasing the number of cells targeted to a particular location in the body. For example, chemotactic molecules can be used to treat wounds and other trauma to tissues by attracting immune cells to the injured location. Chemotactic molecules of the present invention can also attract fibroblasts, which can be used to treat wounds.

It is also contemplated that polynucleotides or polypeptides, as well as agonists or antagonists of the present invention may inhibit chemotactic activity. These molecules could also be used to treat disorders. Thus, polynucleotides or polypeptides, as well as agonists or antagonists of the present invention could be used as an inhibitor of chemotaxis.

15

#### **Binding Activity**

A polypeptide of the present invention may be used to screen for molecules that bind to the polypeptide or for molecules to which the polypeptide binds. The binding of the polypeptide and the molecule may activate (agonist), increase, inhibit (antagonist), or decrease activity of the polypeptide or the molecule bound. Examples of such molecules include antibodies, oligonucleotides, proteins (e.g., receptors), or small molecules.

Preferably, the molecule is closely related to the natural ligand of the polypeptide, e.g., a fragment of the ligand, or a natural substrate, a ligand, a structural or functional mimetic. (See, Coligan et al., Current Protocols in Immunology 1(2):Chapter 5 (1991).) Similarly, the molecule can be closely related to the natural receptor to which the polypeptide binds, or at least, a fragment of the receptor capable of being bound by the polypeptide (e.g., active site). In either case, the molecule can be rationally designed using known techniques.

Preferably, the screening for these molecules involves producing appropriate cells which express the polypeptide. Preferred cells include cells from mammals, yeast, *Drosophila*, or *E. coli*. Cells expressing the polypeptide (or cell membrane containing the expressed polypeptide) are then preferably contacted with a test compound potentially

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containing the molecule to observe binding, stimulation, or inhibition of activity of either the polypeptide or the molecule.

The assay may simply test binding of a candidate compound to the polypeptide, wherein binding is detected by a label, or in an assay involving competition with a labeled competitor. Further, the assay may test whether the candidate compound results in a signal generated by binding to the polypeptide.

Alternatively, the assay can be carried out using cell-free preparations, polypeptide/molecule affixed to a solid support, chemical libraries, or natural product mixtures. The assay may also simply comprise the steps of mixing a candidate compound with a solution containing a polypeptide, measuring polypeptide/molecule activity or binding, and comparing the polypeptide/molecule activity or binding to a standard.

Preferably, an ELISA assay can measure polypeptide level or activity in a sample (e.g., biological sample) using a monoclonal or polyclonal antibody. The antibody can measure polypeptide level or activity by either binding, directly or indirectly, to the polypeptide or by competing with the polypeptide for a substrate.

Additionally, the receptor to which the polypeptide of the present invention binds can be identified by numerous methods known to those of skill in the art, for example, ligand panning and FACS sorting (Coligan, et al., Current Protocols in Immun., 1(2), Chapter 5, (1991)). For example, expression cloning is employed wherein polyadenylated RNA is prepared from a cell responsive to the polypeptides, for example, NIH3T3 cells which are known to contain multiple receptors for the FGF family proteins, and SC-3 cells, and a cDNA library created from this RNA is divided into pools and used to transfect COS cells or other cells that are not responsive to the polypeptides. Transfected cells which are grown on glass slides are exposed to the polypeptide of the present invention, after they have been labelled. The polypeptides can be labeled by a variety of means including iodination or inclusion of a recognition site for a site-specific protein kinase.

Following fixation and incubation, the slides are subjected to auto-radiographic analysis. Positive pools are identified and sub-pools are prepared and re-transfected using an iterative sub-pooling and re-screening process, eventually yielding a single clones that encodes the putative receptor.

As an alternative approach for receptor identification, the labeled polypeptides can be photoaffinity linked with cell membrane or extract preparations that express the receptor



molecule. Cross-linked material is resolved by PAGE analysis and exposed to X-ray film. The labeled complex containing the receptors of the polypeptides can be excised, resolved into peptide fragments, and subjected to protein microsequencing. The amino acid sequence obtained from microsequencing would be used to design a set of degenerate oligonucleotide probes to screen a cDNA library to identify the genes encoding the putative receptors.

Moreover, the techniques of gene-shuffling, motif-shuffling, exon-shuffling, and/or codon-shuffling (collectively referred to as "DNA shuffling") may be employed to modulate the activities of the polypeptide of the present invention thereby effectively generating agonists and antagonists of the polypeptide of the present invention. *See generally*, U.S. Patent Nos. 5,605,793, 5,811,238, 5,830,721, 5,834,252, and 5,837,458, and Patten, P. A., *et al.*, *Curr. Opinion Biotechnol.* 8:724-33 (1997); Harayama, S. *Trends Biotechnol.* 16(2):76-82 (1998); Hansson, L. O., *et al.*, *J. Mol. Biol.* 287:265-76 (1999); and Lorenzo, M. M. and Blasco, R. *Biotechniques* 24(2):308-13 (1998) (each of these patents and publications are hereby incorporated by reference). In one embodiment, alteration of polynucleotides and corresponding polypeptides may be achieved by DNA shuffling. DNA shuffling involves the assembly of two or more DNA segments into a desired molecule by homologous, or site-specific, recombination. In another embodiment, polynucleotides and corresponding polypeptides may be altered by being subjected to random mutagenesis by error-prone PCR, random nucleotide insertion or other methods prior to recombination. In another embodiment, one or more components, motifs, sections, parts, domains, fragments, etc., of the polypeptide of the present invention may be recombined with one or more components, motifs, sections, parts, domains, fragments, etc. of one or more heterologous molecules. In preferred embodiments, the heterologous molecules are family members. In further preferred embodiments, the heterologous molecule is a growth factor such as, for example, platelet-derived growth factor (PDGF), insulin-like growth factor (IGF-I), transforming growth factor (TGF)-alpha, epidermal growth factor (EGF), fibroblast growth factor (FGF), TGF-beta, bone morphogenetic protein (BMP)-2, BMP-4, BMP-5, BMP-6, BMP-7, activins A and B, decapentaplegic(dpp), 60A, OP-2, dorsalin, growth differentiation factors (GDFs), nodal, MIS, inhibin-alpha, TGF-beta1, TGF-beta2, TGF-beta3, TGF-beta5, and glial-derived neurotrophic factor (GDNF).

Other preferred fragments are biologically active fragments of the polypeptide of the present invention. Biologically active fragments are those exhibiting activity similar, but not

necessarily identical, to an activity of the polypeptide of the present invention. The biological activity of the fragments may include an improved desired activity, or a decreased undesirable activity.

Additionally, this invention provides a method of screening compounds to identify those which modulate the action of the polypeptide of the present invention. An example of such an assay comprises combining a mammalian fibroblast cell, a the polypeptide of the present invention, the compound to be screened and 3[H] thymidine under cell culture conditions where the fibroblast cell would normally proliferate. A control assay may be performed in the absence of the compound to be screened and compared to the amount of fibroblast proliferation in the presence of the compound to determine if the compound stimulates proliferation by determining the uptake of 3[H] thymidine in each case. The amount of fibroblast cell proliferation is measured by liquid scintillation chromatography which measures the incorporation of 3[H] thymidine. Both agonist and antagonist compounds may be identified by this procedure.

In another method, a mammalian cell or membrane preparation expressing a receptor for a polypeptide of the present invention is incubated with a labeled polypeptide of the present invention in the presence of the compound. The ability of the compound to enhance or block this interaction could then be measured. Alternatively, the response of a known second messenger system following interaction of a compound to be screened and the receptor is measured and the ability of the compound to bind to the receptor and elicit a second messenger response is measured to determine if the compound is a potential agonist or antagonist. Such second messenger systems include but are not limited to, cAMP guanylate cyclase, ion channels or phosphoinositide hydrolysis.

All of these above assays can be used as diagnostic or prognostic markers. The molecules discovered using these assays can be used to treat disease or to bring about a particular result in a patient (e.g., blood vessel growth) by activating or inhibiting the polypeptide/molecule. Moreover, the assays can discover agents which may inhibit or enhance the production of the polypeptides of the invention from suitably manipulated cells or tissues.

Therefore, the invention includes a method of identifying compounds which bind to a polypeptide of the invention comprising the steps of: (a) incubating a candidate binding compound with a colon and/or colon cancer polynucleotides and/or polypeptides polypeptide

of the invention; and (b) determining if binding has occurred. Moreover, the invention includes a method of identifying agonists/antagonists comprising the steps of: (a) incubating a candidate compound with a colon and/or colon cancer polynucleotides and/or polypeptides polypeptide of the invention, (b) assaying a biological activity, and (b) 5 determining if a biological activity of the polypeptide has been altered.

### **Colon Cancer Antigen Binding Peptides and Other Molecules**

The invention also encompasses screening methods for identifying polypeptides and nonpolypeptides that bind the colon cancer antigens of the invention, and the colon cancer 10 antigen binding molecules identified thereby. These binding molecules are useful, for example, as agonists and antagonists of the colon cancer antigens of the invention. Such agonists and antagonists can be used, in accordance with the invention, in the therapeutic embodiments described in detail, below.

This method comprises the steps of:

- 15           a. contacting a colon cancer antigen of the invention with a plurality of molecules; and
- b. identifying a molecule that binds the colon cancer antigen.

The step of contacting the colon cancer antigen of the invention with the plurality of molecules may be effected in a number of ways. For example, one may contemplate 20 immobilizing the colon cancer antigen on a solid support and bringing a solution of the plurality of molecules in contact with the immobilized colon cancer antigen. Such a procedure would be akin to an affinity chromatographic process, with the affinity matrix being comprised of the immobilized colon cancer antigen of the invention. The molecules having a selective affinity for the colon cancer antigen can then be purified by affinity 25 selection. The nature of the solid support, process for attachment of the colon cancer antigen of the invention to the solid support, solvent, and conditions of the affinity isolation or selection are largely conventional and well known to those of ordinary skill in the art.

Alternatively, one may also separate a plurality of polypeptides into substantially separate fractions comprising a subset of or individual polypeptides. For instance, one can 30 separate the plurality of polypeptides by gel electrophoresis, column chromatography, or like method known to those of ordinary skill for the separation of polypeptides. The individual polypeptides can also be produced by a transformed host cell in such a way as to be

expressed on or about its outer surface (e.g., a recombinant phage). Individual isolates can then be "probed" by a colon cancer antigen, optionally in the presence of an inducer should one be required for expression, to determine if any selective affinity interaction takes place between the colon cancer antigen and the individual clone. Prior to contacting the colon cancer antigen of the invention with each fraction comprising individual polypeptides, the polypeptides could first be transferred to a solid support for additional convenience. Such a solid support may simply be a piece of filter membrane, such as one made of nitrocellulose or nylon. In this manner, positive clones could be identified from a collection of transformed host cells of an expression library, which harbor a DNA construct encoding a polypeptide having a selective affinity for protein of the invention. Furthermore, the amino acid sequence of the polypeptide having a selective affinity for a colon cancer antigen of the invention can be determined directly by conventional means or the coding sequence of the DNA encoding the polypeptide can frequently be determined more conveniently. The primary sequence can then be deduced from the corresponding DNA sequence. If the amino acid sequence is to be determined from the polypeptide itself, one may use microsequencing techniques. The sequencing technique may include mass spectroscopy.

In certain situations, it may be desirable to wash away any unbound colon cancer antigen, or alternatively, unbound polypeptides, from a mixture of the colon cancer antigen of the invention and the plurality of polypeptides prior to attempting to determine or to detect the presence of a selective affinity interaction. Such a wash step may be particularly desirable when the protein of the invention or the plurality of polypeptides is bound to a solid support.

The plurality of molecules provided according to this method may be provided by way of diversity libraries, such as random or combinatorial peptide or nonpeptide libraries which can be screened for molecules that specifically bind to a protein of the invention. Many libraries are known in the art that can be used, e.g., chemically synthesized libraries, recombinant (e.g., phage display libraries), and in vitro translation-based libraries. Examples of chemically synthesized libraries are described in Fodor et al., 1991, *Science* 251:767-773; Houghten et al., 1991, *Nature* 354:84-86; Lam et al., 1991, *Nature* 354:82-84; Medynski, 1994, *Bio/Technology* 12:709-710; Gallop et al., 1994, *J. Medicinal Chemistry* 37(9):1233-1251; Ohlmeyer et al., 1993, *Proc. Natl. Acad. Sci. USA* 90:10922-10926; Erb et al., 1994, *Proc. Natl. Acad. Sci. USA* 91:11422-11426; Houghten et al., 1992, *Biotechniques* 13:412; Jayawickreme et al., 1994, *Proc. Natl. Acad. Sci. USA* 91:1614-1618; Salmon et al., 1993,

Proc. Natl. Acad. Sci. USA 90:11708-11712; PCT Publication No. WO 93/20242; and Brenner and Lerner, 1992, Proc. Natl. Acad. Sci. USA 89:5381-5383.

Examples of phage display libraries are described in Scott and Smith, 1990, Science 249:386-390; Devlin et al., 1990, Science, 249:404-406; Christian, R. B., et al., 1992, J. Mol. Biol. 227:711-718); Lenstra, 1992, J. Immunol. Meth. 152:149-157; Kay et al., 1993, Gene 128:59-65; and PCT Publication No. WO 94/18318 dated Aug. 18, 1994.

In vitro translation-based libraries include, but are not limited to, those described in PCT Publication No. WO 91/05058 dated Apr. 18, 1991; and Mattheakis et al., 1994, Proc. Natl. Acad. Sci. USA 91:9022-9026.

10 By way of examples of nonpeptide libraries, a benzodiazepine library (see e.g., Bunin et al., 1994, Proc. Natl. Acad. Sci. USA 91:4708-4712) can be adapted for use. Peptoid libraries (Simon et al., 1992, Proc. Natl. Acad. Sci. USA 89:9367-9371) can also be used. Another example of a library that can be used, in which the amide functionalities in peptides have been permethylated to generate a chemically transformed combinatorial library, is described by Ostresh et al. (1994, Proc. Natl. Acad. Sci. USA 91:11138-11142).

The variety of non-peptide libraries that are useful in the present invention is great. For example, Ecker and Crooke, 1995, Bio/Technology 13:351-360 list benzodiazepines, hydantoins, piperazinediones, biphenyls, sugar analogs, beta-mercaptoketones, arylacetic acids, acylpiperidines, benzopyrans, cubanes, xanthines, aminimides, and oxazolones as among the chemical species that form the basis of various libraries.

20 Non-peptide libraries can be classified broadly into two types: decorated monomers and oligomers. Decorated monomer libraries employ a relatively simple scaffold structure upon which a variety functional groups is added. Often the scaffold will be a molecule with a known useful pharmacological activity. For example, the scaffold might be the benzodiazepine structure.

25 Non-peptide oligomer libraries utilize a large number of monomers that are assembled together in ways that create new shapes that depend on the order of the monomers. Among the monomer units that have been used are carbamates, pyrrolinones, and morpholinos. Peptoids, peptide-like oligomers in which the side chain is attached to the alpha amino group rather than the alpha carbon, form the basis of another version of non-peptide oligomer libraries. The first non-peptide oligomer libraries utilized a single type of monomer and thus contained a repeating backbone. Recent libraries have utilized more than one

monomer, giving the libraries added flexibility.

Screening the libraries can be accomplished by any of a variety of commonly known methods. See, e.g., the following references, which disclose screening of peptide libraries: Parmley and Smith, 1989, *Adv. Exp. Med. Biol.* 251:215-218; Scott and Smith, 1990, *Science* 249:386-390; Fowlkes et al., 1992, *BioTechniques* 13:422-427; Oldenburg et al., 1992, *Proc. Natl. Acad. Sci. USA* 89:5393-5397; Yu et al., 1994, *Cell* 76:933-945; Staudt et al., 1988, *Science* 241:577-580; Bock et al., 1992, *Nature* 355:564-566; Tuerk et al., 1992, *Proc. Natl. Acad. Sci. USA* 89:6988-6992; Ellington et al., 1992, *Nature* 355:850-852; U.S. Pat. No. 5,096,815, U.S. Pat. No. 5,223,409, and U.S. Pat. No. 5,198,346, all to Ladner et al.;  
10 Rebar and Pabo, 1993, *Science* 263:671-673; and CT Publication No. WO 94/18318.

In a specific embodiment, screening to identify a molecule that binds a colon cancer antigen can be carried out by contacting the library members with a colon cancer antigen of the invention immobilized on a solid phase and harvesting those library members that bind to the colon cancer antigen. Examples of such screening methods, termed "panning" techniques  
15 are described by way of example in Parmley and Smith, 1988, *Gene* 73:305-318; Fowlkes et al., 1992, *BioTechniques* 13:422-427; PCT Publication No. WO 94/18318; and in references cited herein.

In another embodiment, the two-hybrid system for selecting interacting proteins in yeast (Fields and Song, 1989, *Nature* 340:245-246; Chien et al., 1991, *Proc. Natl. Acad. Sci. USA* 88:9578-9582) can be used to identify molecules that specifically bind to a colon and/or  
20 colon cancer related protein of the invention.

Where a colon cancer antigen of the invention binding molecule is a polypeptide, the polypeptide can be conveniently selected from any peptide library, including random peptide libraries, combinatorial peptide libraries, or biased peptide libraries. The term "biased" is  
25 used herein to mean that the method of generating the library is manipulated so as to restrict one or more parameters that govern the diversity of the resulting collection of molecules, in this case peptides.

Thus, a truly random peptide library would generate a collection of peptides in which the probability of finding a particular amino acid at a given position of the peptide is the  
30 same for all 20 amino acids. A bias can be introduced into the library, however, by specifying, for example, that a lysine occur every fifth amino acid or that positions 4, 8, and 9 of a decapeptide library be fixed to include only arginine. Clearly, many types of biases can

be contemplated, and the present invention is not restricted to any particular bias. Furthermore, the present invention contemplates specific types of peptide libraries, such as phage displayed peptide libraries and those that utilize a DNA construct comprising a lambda phage vector with a DNA insert.

5 As mentioned above, in the case of a colon and/or colon cancer related protein of the invention binding molecule that is a polypeptide, the polypeptide may have about 6 to less than about 60 amino acid residues, preferably about 6 to about 10 amino acid residues, and most preferably, about 6 to about 22 amino acids. In another embodiment, a colon and/or colon cancer related protein of the invention binding polypeptide has in the range of 15-100  
10 amino acids, or 20-50 amino acids.

The selected colon cancer antigen protein of the invention binding polypeptide can be obtained by chemical synthesis or recombinant expression.

15

### **Targeted Delivery**

In another embodiment, the invention provides a method of delivering compositions to targeted cells expressing a colon cancer antigen of the invention.

As discussed herein, polypeptides or antibodies of the invention may be associated  
20 with heterologous polypeptides, heterologous nucleic acids, toxins, or prodrugs via hydrophobic, hydrophilic, ionic and/or covalent interactions. In one embodiment, the invention provides a method for the specific delivery of compositions of the invention to cells by administering polypeptides of the invention (including antibodies) that are associated with heterologous polypeptides or nucleic acids. In one example, the invention provides a method  
25 for delivering a therapeutic protein into the targeted cell. In another example, the invention provides a method for delivering a single stranded nucleic acid (e.g., antisense or ribozymes) or double stranded nucleic acid (e.g., DNA that can integrate into the cell's genome or replicate episomally and that can be transcribed) into the targeted cell.

In another embodiment, the invention provides a method for the specific destruction  
30 of cells (e.g., the destruction of tumor cells) by administering polypeptides of the invention (e.g., polypeptides of the invention or antibodies of the invention) in association with toxins or cytotoxic prodrugs.

By "toxin" is meant compounds that bind and activate endogenous cytotoxic effector systems, radioisotopes, holotoxins, modified toxins, catalytic subunits of toxins, or any molecules or enzymes not normally present in or on the surface of a cell that under defined conditions cause the cell's death. Toxins that may be used according to the methods of the invention include, but are not limited to, radioisotopes known in the art, compounds such as, for example, antibodies (or complement fixing containing portions thereof) that bind an inherent or induced endogenous cytotoxic effector system, thymidine kinase, endonuclease, RNase, alpha toxin; ricin, abrin, *Pseudomonas* exotoxin A, diphtheria toxin, saporin, momordin, gelonin, pokeweed antiviral protein, alpha-sarcin and cholera toxin. By "cytotoxic prodrug" is meant a non-toxic compound that is converted by an enzyme, normally present in the cell, into a cytotoxic compound. Cytotoxic prodrugs that may be used according to the methods of the invention include, but are not limited to, glutamyl derivatives of benzoic acid mustard alkylating agent, phosphate derivatives of etoposide or mitomycin C, cytosine arabinoside, daunorubisin, and phenoxyacetamide derivatives of doxorubicin.

### **Drug Screening**

Further contemplated is the use of the polypeptides of the present invention, or the polynucleotides encoding these polypeptides, to screen for molecules which modify the activities of the polypeptides of the present invention. Such a method would include contacting the polypeptide of the present invention with a selected compound(s) suspected of having antagonist or agonist activity, and assaying the activity of these polypeptides following binding.

This invention is particularly useful for screening therapeutic compounds by using the polypeptides of the present invention, or binding fragments thereof, in any of a variety of drug screening techniques. The polypeptide or fragment employed in such a test may be affixed to a solid support, expressed on a cell surface, free in solution, or located intracellularly. One method of drug screening utilizes eukaryotic or prokaryotic host cells which are stably transformed with recombinant nucleic acids expressing the polypeptide or fragment. Drugs are screened against such transformed cells in competitive binding assays. One may measure, for example, the formulation of complexes between the agent being tested and a polypeptide of the present invention.



Thus, the present invention provides methods of screening for drugs or any other agents which affect activities mediated by the polypeptides of the present invention. These methods comprise contacting such an agent with a polypeptide of the present invention or a fragment thereof and assaying for the presence of a complex between the agent and the polypeptide or a fragment thereof, by methods well known in the art. In such a competitive binding assay, the agents to screen are typically labeled. Following incubation, free agent is separated from that present in bound form, and the amount of free or uncomplexed label is a measure of the ability of a particular agent to bind to the polypeptides of the present invention.

Another technique for drug screening provides high throughput screening for compounds having suitable binding affinity to the polypeptides of the present invention, and is described in great detail in European Patent Application 84/03564, published on September 13, 1984, which is incorporated herein by reference herein. Briefly stated, large numbers of different small peptide test compounds are synthesized on a solid substrate, such as plastic pins or some other surface. The peptide test compounds are reacted with polypeptides of the present invention and washed. Bound polypeptides are then detected by methods well known in the art. Purified polypeptides are coated directly onto plates for use in the aforementioned drug screening techniques. In addition, non-neutralizing antibodies may be used to capture the peptide and immobilize it on the solid support.

This invention also contemplates the use of competitive drug screening assays in which neutralizing antibodies capable of binding polypeptides of the present invention specifically compete with a test compound for binding to the polypeptides or fragments thereof. In this manner, the antibodies are used to detect the presence of any peptide which shares one or more antigenic epitopes with a polypeptide of the invention.

#### **Antisense And Ribozyme (Antagonists)**

In specific embodiments, antagonists according to the present invention are nucleic acids corresponding to the sequences contained in SEQ ID NO:X, or the complementary strand thereof, and/or to nucleotide sequences contained in the deposited clone identified in Table 1. In one embodiment, antisense sequence is generated internally, by the organism, in another embodiment, the antisense sequence is separately administered (see, for example, O'Connor, J., Neurochem. 56:560 (1991). Oligodeoxynucleotides as Antisense Inhibitors of

Gene Expression, CRC Press, Boca Raton, FL (1988). Antisense technology can be used to control gene expression through antisense DNA or RNA, or through triple-helix formation. Antisense techniques are discussed for example, in Okano, J., *Neurochem.* 56:560 (1991); Oligodeoxynucleotides as Antisense Inhibitors of Gene Expression, CRC Press, Boca Raton, FL (1988). Triple helix formation is discussed in, for instance, Lee et al., *Nucleic Acids Research* 6:3073 (1979); Cooney et al., *Science* 241:456 (1988); and Dervan et al., *Science* 251:1300 (1991). The methods are based on binding of a polynucleotide to a complementary DNA or RNA.

For example, the use of c-myc and c-myb antisense RNA constructs to inhibit the growth of the non-lymphocytic leukemia cell line HL-60 and other cell lines was previously described. (Wickstrom et al. (1988); Anfossi et al. (1989)). These experiments were performed in vitro by incubating cells with the oligoribonucleotide. A similar procedure for in vivo use is described in WO 91/15580. Briefly, a pair of oligonucleotides for a given antisense RNA is produced as follows: A sequence complimentary to the first 15 bases of the open reading frame is flanked by an EcoRI site on the 5' end and a HindIII site on the 3' end. Next, the pair of oligonucleotides is heated at 90°C for one minute and then annealed in 2X ligation buffer (20mM TRIS HCl pH 7.5, 10mM MgCl<sub>2</sub>, 10mM dithiothreitol (DTT) and 0.2 mM ATP) and then ligated to the EcoRI/Hind III site of the retroviral vector PMV7 (WO 91/15580).

For example, the 5' coding portion of a polynucleotide that encodes the polypeptide of the present invention may be used to design an antisense RNA oligonucleotide of from about 10 to 40 base pairs in length. A DNA oligonucleotide is designed to be complementary to a region of the gene involved in transcription thereby preventing transcription and the production of the receptor. The antisense RNA oligonucleotide hybridizes to the mRNA in vivo and blocks translation of the mRNA molecule into receptor polypeptide.

In one embodiment, the antisense nucleic acid of the invention is produced intracellularly by transcription from an exogenous sequence. For example, a vector or a portion thereof, is transcribed, producing an antisense nucleic acid (RNA) of the invention. Such a vector would contain a sequence encoding the antisense nucleic acid. Such a vector can remain episomal or become chromosomally integrated, as long as it can be transcribed to produce the desired antisense RNA. Such vectors can be constructed by recombinant DNA technology methods standard in the art. Vectors can be plasmid, viral, or others known in the

art, used for replication and expression in vertebrate cells. Expression of the sequence encoding the polypeptide of the present invention or fragments thereof, can be by any promoter known in the art to act in vertebrate, preferably human cells. Such promoters can be inducible or constitutive. Such promoters include, but are not limited to, the SV40 early promoter region (Bernoist and Chambon, Nature 29:304-310 (1981), the promoter contained in the 3' long terminal repeat of Rous sarcoma virus (Yamamoto et al., Cell 22:787-797 (1980), the herpes thymidine promoter (Wagner et al., Proc. Natl. Acad. Sci. U.S.A. 78:1441-1445 (1981), the regulatory sequences of the metallothionein gene (Brinster, et al., Nature 296:39-42 (1982)), etc.

10       The antisense nucleic acids of the invention comprise a sequence complementary to at least a portion of an RNA transcript of a gene of the present invention. However, absolute complementarity, although preferred, is not required. A sequence "complementary to at least a portion of an RNA," referred to herein, means a sequence having sufficient complementarity to be able to hybridize with the RNA, forming a stable duplex; in the case  
15       of double stranded antisense nucleic acids, a single strand of the duplex DNA may thus be tested, or triplex formation may be assayed. The ability to hybridize will depend on both the degree of complementarity and the length of the antisense nucleic acid. Generally, the larger the hybridizing nucleic acid, the more base mismatches with a RNA it may contain and still form a stable duplex (or triplex as the case may be). One skilled in the art can ascertain a  
20       tolerable degree of mismatch by use of standard procedures to determine the melting point of the hybridized complex.

      Oligonucleotides that are complementary to the 5' end of the message, e.g., the 5' untranslated sequence up to and including the AUG initiation codon, should work most efficiently at inhibiting translation. However, sequences complementary to the 3'  
25       untranslated sequences of mRNAs have been shown to be effective at inhibiting translation of mRNAs as well. See generally, Wagner, R., 1994, Nature 372:333-335. Thus, oligonucleotides complementary to either the 5'- or 3'- non- translated, non-coding regions of shown in Table 1 could be used in an antisense approach to inhibit translation of endogenous mRNA. Oligonucleotides complementary to the 5' untranslated region of the mRNA should  
30       include the complement of the AUG start codon. Antisense oligonucleotides complementary to mRNA coding regions are less efficient inhibitors of translation but could be used in accordance with the invention. Whether designed to hybridize to the 5'-, 3'- or coding region

of mRNA of the present invention, antisense nucleic acids should be at least six nucleotides in length, and are preferably oligonucleotides ranging from 6 to about 50 nucleotides in length. In specific aspects the oligonucleotide is at least 10 nucleotides, at least 17 nucleotides, at least 25 nucleotides or at least 50 nucleotides.

5       The polynucleotides of the invention can be DNA or RNA or chimeric mixtures or derivatives or modified versions thereof, single-stranded or double-stranded. The oligonucleotide can be modified at the base moiety, sugar moiety, or phosphate backbone, for example, to improve stability of the molecule, hybridization, etc. The oligonucleotide may include other appended groups such as peptides (e.g., for targeting host cell receptors in  
10   vivo), or agents facilitating transport across the cell membrane (see, e.g., Letsinger et al., 1989, Proc. Natl. Acad. Sci. U.S.A. 86:6553-6556; Lemaitre et al., 1987, Proc. Natl. Acad. Sci. 84:648-652; PCT Publication No. WO88/09810, published December 15, 1988) or the blood-brain barrier (see, e.g., PCT Publication No. WO89/10134, published April 25, 1988), hybridization-triggered cleavage agents. (See, e.g., Krol et al., 1988, BioTechniques 6:958-  
15   976) or intercalating agents. (See, e.g., Zon, 1988, Pharm. Res. 5:539-549). To this end, the oligonucleotide may be conjugated to another molecule, e.g., a peptide, hybridization triggered cross-linking agent, transport agent, hybridization-triggered cleavage agent, etc.

      The antisense oligonucleotide may comprise at least one modified base moiety which is selected from the group including, but not limited to, 5-fluorouracil, 5-bromouracil,  
20   5-chlorouracil, 5-iodouracil, hypoxanthine, xantine, 4-acetylcytosine, 5-(carboxyhydroxymethyl) uracil, 5-carboxymethylaminomethyl-2-thiouridine, 5-carboxymethylaminomethyluracil, dihydrouracil, beta-D-galactosylqueosine, inosine, N6-isopentenyladenine, 1-methylguanine, 1-methylinosine, 2,2-dimethylguanine, 2-methyladenine, 2-methylguanine, 3-methylcytosine, 5-methylcytosine, N6-adenine,  
25   7-methylguanine, 5-methylaminomethyluracil, 5-methoxyaminomethyl-2-thiouracil, beta-D-mannosylqueosine, 5'-methoxycarboxymethyluracil, 5-methoxyuracil, 2-methylthio-N6-isopentenyladenine, uracil-5-oxyacetic acid (v), wybutoxosine, pseudouracil, queosine, 2-thiocytosine, 5-methyl-2-thiouracil, 2-thiouracil, 4-thiouracil, 5-methyluracil, uracil-5-oxyacetic acid methylester, uracil-5-oxyacetic acid (v), 5-methyl-2-thiouracil, 3-(3-amino-  
30   3-N-2-carboxypropyl) uracil, (acp3)w, and 2,6-diaminopurine.

The antisense oligonucleotide may also comprise at least one modified sugar moiety selected from the group including, but not limited to, arabinose, 2-fluoroarabinose, xylulose, and hexose.

5 In yet another embodiment, the antisense oligonucleotide comprises at least one modified phosphate backbone selected from the group including, but not limited to, a phosphorothioate, a phosphorodithioate, a phosphoramidothioate, a phosphoramidate, a phosphordiamidate, a methylphosphonate, an alkyl phosphotriester, and a formacetal or analog thereof.

10 In yet another embodiment, the antisense oligonucleotide is an a-anomeric oligonucleotide. An a-anomeric oligonucleotide forms specific double-stranded hybrids with complementary RNA in which, contrary to the usual b-units, the strands run parallel to each other (Gautier et al., 1987, Nucl. Acids Res. 15:6625-6641). The oligonucleotide is a 2'-O-methylribonucleotide (Inoue et al., 1987, Nucl. Acids Res. 15:6131-6148), or a chimeric RNA-DNA analogue (Inoue et al., 1987, FEBS Lett. 215:327-330).

15 Polynucleotides of the invention may be synthesized by standard methods known in the art, e.g. by use of an automated DNA synthesizer (such as are commercially available from Biosearch, Applied Biosystems, etc.). As examples, phosphorothioate oligonucleotides may be synthesized by the method of Stein et al. (1988, Nucl. Acids Res. 16:3209), methylphosphonate oligonucleotides can be prepared by use of controlled pore glass polymer supports (Sarin et al., 1988, Proc. Natl. Acad. Sci. U.S.A. 85:7448-7451), etc.

20 While antisense nucleotides complementary to the coding region sequence could be used, those complementary to the transcribed untranslated region are most preferred.

Potential antagonists according to the invention also include catalytic RNA, or a ribozyme (See, e.g., PCT International Publication WO 90/11364, published October 4, 25 1990; Sarver et al, Science 247:1222-1225 (1990). While ribozymes that cleave mRNA at site specific recognition sequences can be used to destroy mRNAs, the use of hammerhead ribozymes is preferred. Hammerhead ribozymes cleave mRNAs at locations dictated by flanking regions that form complementary base pairs with the target mRNA. The sole requirement is that the target mRNA have the following sequence of two bases: 5'-UG-3'. 30 The construction and production of hammerhead ribozymes is well known in the art and is described more fully in Haseloff and Gerlach, Nature 334:585-591 (1988). There are numerous potential hammerhead ribozyme cleavage sites within the nucleotide sequence of

SEQ ID NO:X. Preferably, the ribozyme is engineered so that the cleavage recognition site is located near the 5' end of the mRNA; i.e., to increase efficiency and minimize the intracellular accumulation of non-functional mRNA transcripts.

As in the antisense approach, the ribozymes of the invention can be composed of modified oligonucleotides (e.g. for improved stability, targeting, etc.) and should be delivered to cells which express in vivo. DNA constructs encoding the ribozyme may be introduced into the cell in the same manner as described above for the introduction of antisense encoding DNA. A preferred method of delivery involves using a DNA construct "encoding" the ribozyme under the control of a strong constitutive promoter, such as, for example, pol III or pol II promoter, so that transfected cells will produce sufficient quantities of the ribozyme to destroy endogenous messages and inhibit translation. Since ribozymes unlike antisense molecules, are catalytic, a lower intracellular concentration is required for efficiency.

Antagonist/agonist compounds may be employed to inhibit the cell growth and proliferation effects of the polypeptides of the present invention on neoplastic cells and tissues, i.e. stimulation of angiogenesis of tumors, and, therefore, retard or prevent abnormal cellular growth and proliferation, for example, in tumor formation or growth.

The antagonist/agonist may also be employed to prevent hyper-vascular diseases, and prevent the proliferation of epithelial lens cells after extracapsular cataract surgery. Prevention of the mitogenic activity of the polypeptides of the present invention may also be desirable in cases such as restenosis after balloon angioplasty.

The antagonist/agonist may also be employed to prevent the growth of scar tissue during wound healing.

The antagonist/agonist may also be employed to treat the diseases described herein. Thus, the invention provides a method of treating disorders or diseases, including but not limited to the disorders or diseases listed throughout this application, associated with overexpression of a polynucleotide of the present invention by administering to a patient (a) an antisense molecule directed to the polynucleotide of the present invention, and/or (b) a ribozyme directed to the polynucleotide of the present invention.

### **Other Activities**

A polypeptide, polynucleotide, agonist, or antagonist of the present invention, as a result of the ability to stimulate vascular endothelial cell growth, may be employed in

treatment for stimulating re-vascularization of ischemic tissues due to various disease conditions such as thrombosis, arteriosclerosis, and other cardiovascular conditions. The polypeptide, polynucleotide, agonist, or antagonist of the present invention may also be employed to stimulate angiogenesis and limb regeneration, as discussed above.

5 A polypeptide, polynucleotide, agonist, or antagonist of the present invention may also be employed for treating wounds due to injuries, burns, post-operative tissue repair, and ulcers since they are mitogenic to various cells of different origins, such as fibroblast cells and skeletal muscle cells, and therefore, facilitate the repair or replacement of damaged or diseased tissue.

10 A polypeptide, polynucleotide, agonist, or antagonist of the present invention may also be employed stimulate neuronal growth and to treat and prevent neuronal damage which occurs in certain neuronal disorders or neuro-degenerative conditions such as Alzheimer's disease, Parkinson's disease, and AIDS-related complex. A polypeptide, polynucleotide, agonist, or antagonist of the present invention may have the ability to stimulate chondrocyte  
15 growth, therefore, they may be employed to enhance bone and periodontal regeneration and aid in tissue transplants or bone grafts.

A polypeptide, polynucleotide, agonist, or antagonist of the present invention may be also be employed to prevent skin aging due to sunburn by stimulating keratinocyte growth.

A polypeptide, polynucleotide, agonist, or antagonist of the present invention may  
20 also be employed for preventing hair loss, since FGF family members activate hair-forming cells and promotes melanocyte growth. Along the same lines, a polypeptide, polynucleotide, agonist, or antagonist of the present invention may be employed to stimulate growth and differentiation of hematopoietic cells and bone marrow cells when used in combination with other cytokines.

25 A polypeptide, polynucleotide, agonist, or antagonist of the present invention may also be employed to maintain organs before transplantation or for supporting cell culture of primary tissues. A polypeptide, polynucleotide, agonist, or antagonist of the present invention may also be employed for inducing tissue of mesodermal origin to differentiate in early embryos.

A polypeptide, polynucleotide, agonist, or antagonist of the present invention may  
30 also increase or decrease the differentiation or proliferation of embryonic stem cells, besides, as discussed above, hematopoietic lineage.

A polypeptide, polynucleotide, agonist, or antagonist of the present invention may also be used to modulate mammalian characteristics, such as body height, weight, hair color, eye color, skin, percentage of adipose tissue, pigmentation, size, and shape (e.g., cosmetic surgery). Similarly, a polypeptide, polynucleotide, agonist, or antagonist of the present invention may be used to modulate mammalian metabolism affecting catabolism, anabolism, processing, utilization, and storage of energy.

A polypeptide, polynucleotide, agonist, or antagonist of the present invention may be used to change a mammal's mental state or physical state by influencing biorhythms, circadian rhythms, depression (including depressive disorders), tendency for violence, tolerance for pain, reproductive capabilities (preferably by Activin or Inhibin-like activity), hormonal or endocrine levels, appetite, libido, memory, stress, or other cognitive qualities.

A polypeptide, polynucleotide, agonist, or antagonist of the present invention may also be used as a food additive or preservative, such as to increase or decrease storage capabilities, fat content, lipid, protein, carbohydrate, vitamins, minerals, cofactors or other nutritional components.

The above-recited applications have uses in a wide variety of hosts. Such hosts include, but are not limited to, human, murine, rabbit, goat, guinea pig, camel, horse, mouse, rat, hamster, pig, micro-pig, chicken, goat, cow, sheep, dog, cat, non-human primate, and human. In specific embodiments, the host is a mouse, rabbit, goat, guinea pig, chicken, rat, hamster, pig, sheep, dog or cat. In preferred embodiments, the host is a mammal. In most preferred embodiments, the host is a human.

#### **Other Preferred Embodiments**

Other preferred embodiments of the claimed invention include an isolated nucleic acid molecule comprising a nucleotide sequence which is at least 95% identical to a sequence of at least about 50 contiguous nucleotides in the nucleotide sequence of SEQ ID NO:X wherein X is any integer as defined in Table 1.

Also preferred is a nucleic acid molecule wherein said sequence of contiguous nucleotides is included in the nucleotide sequence of SEQ ID NO:X in the range of positions beginning with the nucleotide at about the position of the 5' Nucleotide of the Clone Sequence and ending with the nucleotide at about the position of the 3' Nucleotide of the Clone Sequence as defined for SEQ ID NO:X in Table 1.



Also preferred is a nucleic acid molecule wherein said sequence of contiguous nucleotides is included in the nucleotide sequence of SEQ ID NO:X in the range of positions beginning with the nucleotide at about the position of the 5' Nucleotide of the Start Codon and ending with the nucleotide at about the position of the 3' Nucleotide of the Clone Sequence as defined for SEQ ID NO:X in Table 1.

Also preferred is an isolated nucleic acid molecule comprising a nucleotide sequence which is at least 95% identical to a sequence of at least about 150 contiguous nucleotides in the nucleotide sequence of SEQ ID NO:X.

Further preferred is an isolated nucleic acid molecule comprising a nucleotide sequence which is at least 95% identical to a sequence of at least about 500 contiguous nucleotides in the nucleotide sequence of SEQ ID NO:X.

A further preferred embodiment is a nucleic acid molecule comprising a nucleotide sequence which is at least 95% identical to the nucleotide sequence of SEQ ID NO:X beginning with the nucleotide at about the position of the 5' Nucleotide of the First Amino Acid and ending with the nucleotide at about the position of the 3' Nucleotide of the Clone Sequence as defined for SEQ ID NO:X in Table 1.

A further preferred embodiment is an isolated nucleic acid molecule comprising a nucleotide sequence which is at least 95% identical to the complete nucleotide sequence of SEQ ID NO:X.

Also preferred is an isolated nucleic acid molecule which hybridizes under stringent hybridization conditions to a nucleic acid molecule, wherein said nucleic acid molecule which hybridizes does not hybridize under stringent hybridization conditions to a nucleic acid molecule having a nucleotide sequence consisting of only A residues or of only T residues.

Also preferred is a composition of matter comprising a DNA molecule which comprises a human cDNA clone identified by a cDNA Clone Identifier in Table 1, which DNA molecule is contained in a cDNA library shown in Table 9 which was deposited with the American Type Culture Collection and given the ATCC Deposit Numbers shown above for said cDNA library identifier in Table 2.

Also preferred is an isolated nucleic acid molecule comprising a nucleotide sequence which is at least 95% identical to a sequence of at least 50 contiguous nucleotides in the nucleotide sequence of a human cDNA clone identified by a cDNA Clone Identifier in Table 1, which DNA molecule is contained in a cDNA library shown in Table 9 which was

deposited with the American Type Culture Collection and given the ATCC Deposit Numbers shown above for said cDNA library identifier in Table 2.

Also preferred is an isolated nucleic acid molecule, wherein said sequence of at least 50 contiguous nucleotides is included in the nucleotide sequence of the complete open reading frame sequence encoded by said human cDNA clone.

Also preferred is an isolated nucleic acid molecule comprising a nucleotide sequence which is at least 95% identical to sequence of at least 150 contiguous nucleotides in the nucleotide sequence encoded by said human cDNA clone.

A further preferred embodiment is an isolated nucleic acid molecule comprising a nucleotide sequence which is at least 95% identical to sequence of at least 500 contiguous nucleotides in the nucleotide sequence encoded by said human cDNA clone.

A further preferred embodiment is an isolated nucleic acid molecule comprising a nucleotide sequence which is at least 95% identical to the complete nucleotide sequence encoded by said human cDNA clone.

A further preferred embodiment is a method for detecting in a biological sample a nucleic acid molecule comprising a nucleotide sequence which is at least 95% identical to a sequence of at least 50 contiguous nucleotides in a sequence selected from the group consisting of: a nucleotide sequence of SEQ ID NO:X wherein X is any integer as defined in Table 1; and a nucleotide sequence encoded by a human cDNA clone identified by a cDNA Clone Id in Table 1 which DNA molecule is contained in a cDNA library shown in Table 9 which was deposited with the American Type Culture Collection and given the ATCC Deposit Numbers shown above for said cDNA library identifier; which method comprises a step of comparing a nucleotide sequence of at least one nucleic acid molecule in said sample with a sequence selected from said group and determining whether the sequence of said nucleic acid molecule in said sample is at least 95% identical to said selected sequence.

Also preferred is the above method wherein said step of comparing sequences comprises determining the extent of nucleic acid hybridization between nucleic acid molecules in said sample and a nucleic acid molecule comprising said sequence selected from said group. Similarly, also preferred is the above method wherein said step of comparing sequences is performed by comparing the nucleotide sequence determined from a nucleic acid molecule in said sample with said sequence selected from said group. The nucleic acid molecules can comprise DNA molecules or RNA molecules.

A further preferred embodiment is a method for identifying the species, tissue or cell type of a biological sample which method comprises a step of detecting nucleic acid molecules in said sample, if any, comprising a nucleotide sequence that is at least 95% identical to a sequence of at least 50 contiguous nucleotides in a sequence selected from the group consisting of: a nucleotide sequence of SEQ ID NO:X wherein X is any integer as defined in Table 1; and a nucleotide sequence encoded by a human cDNA clone identified by a cDNA Clone Identifier in Table 1 and contained in a cDNA library shown in Table 9 which was deposited with the American Type Culture Collection and given the ATCC Deposit Numbers shown above for said cDNA library identifier.

The method for identifying the species, tissue or cell type of a biological sample can comprise a step of detecting nucleic acid molecules comprising a nucleotide sequence in a panel of at least two nucleotide sequences, wherein at least one sequence in said panel is at least 95% identical to a sequence of at least 50 contiguous nucleotides in a sequence selected from said group.

Also preferred is a method for diagnosing in a subject a pathological condition associated with abnormal structure or expression of a gene encoding a protein identified in Table 1, wherein the method comprises a step of detecting in a biological sample obtained from said subject nucleic acid molecules, if any, comprising a nucleotide sequence that is at least 95% identical to a sequence of at least 50 contiguous nucleotides in a sequence selected from the group consisting of: a nucleotide sequence of SEQ ID NO:X wherein X is any integer as defined in Table 1; and a nucleotide sequence encoded by a human cDNA clone identified by a cDNA Clone Identifier in Table 1 and contained in a cDNA library shown in Table 9 which was deposited with the American Type Culture Collection and given the ATCC Deposit Numbers shown above for said cDNA library identifier.

The method for diagnosing a pathological condition can comprise a step of detecting nucleic acid molecules comprising a nucleotide sequence in a panel of at least two nucleotide sequences, wherein at least one sequence in said panel is at least 95% identical to a sequence of at least 50 contiguous nucleotides in a sequence selected from said group.

Also preferred is a composition of matter comprising isolated nucleic acid molecules wherein the nucleotide sequences of said nucleic acid molecules comprise a panel of at least two nucleotide sequences, wherein at least one sequence in said panel is at least 95% identical to a sequence of at least 50 contiguous nucleotides in a sequence selected from the

group consisting of: a nucleotide sequence of SEQ ID NO:X wherein X is any integer as defined in Table 1; and a nucleotide sequence encoded by a human cDNA clone identified by a cDNA Clone Identifier in Table 1 and contained in a cDNA library shown in Table 9 which was deposited with the American Type Culture Collection and given the ATCC Deposit  
5 Numbers shown above for said cDNA library identifier. The nucleic acid molecules can comprise DNA molecules or RNA molecules.

Also preferred is a composition of matter comprising isolated nucleic acid molecules wherein the nucleotide sequences of said nucleic acid molecules comprise a DNA microarray or "chip" of at least 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 15, 20, 25, 30, 40, 50, 100, 150, 200, 250, 300,  
10 500, 1000, 2000, 3000 or 4000 nucleotide sequences, wherein at least one sequence in said DNA microarray or "chip" is at least 95% identical to a sequence of at least 50 contiguous nucleotides in a sequence selected from the group consisting of: a nucleotide sequence of SEQ ID NO:X wherein X is any integer as defined in Table 1; and a nucleotide sequence encoded by a human cDNA clone identified by a cDNA Clone Identifier in Table 1 and  
15 contained in a cDNA library shown in Table 9 which was deposited with the American Type Culture Collection and given the ATCC Deposit Numbers shown above for said cDNA library identifier. The nucleic acid molecules can comprise DNA molecules or RNA molecules.

Also preferred is an isolated polypeptide comprising an amino acid sequence at least  
20 90% identical to a sequence of at least about 10 contiguous amino acids in the amino acid sequence of SEQ ID NO:Y wherein Y is any integer as defined in Table 1.

Also preferred is an isolated polypeptide comprising an amino acid sequence at least 95% identical to a sequence of at least about 30 contiguous amino acids in the amino acid sequence of SEQ ID NO:Y wherein Y is any integer as defined in Table 1.

25 Further preferred is an isolated polypeptide comprising an amino acid sequence at least 95% identical to a sequence of at least about 100 contiguous amino acids in the amino acid sequence of SEQ ID NO:Y wherein Y is any integer as defined in Table 1.

Further preferred is an isolated polypeptide comprising an amino acid sequence at least 95% identical to the complete amino acid sequence of SEQ ID NO:Y wherein Y is any  
30 integer as defined in Table 1.

Further preferred is an isolated polypeptide comprising an amino acid sequence at least 90% identical to a sequence of at least about 10 contiguous amino acids in the complete

amino acid sequence of a protein encoded by a human cDNA clone identified by a cDNA Clone Identifier in Table 1 and contained in a cDNA library shown in Table 9 which was deposited with the American Type Culture Collection and given the ATCC Deposit Numbers shown above for said cDNA library identifier.

5 Also preferred is a polypeptide wherein said sequence of contiguous amino acids is included in the amino acid sequence of a portion of the protein encoded by a human cDNA clone identified by a cDNA Clone Identifier in Table 1 and contained in a cDNA library shown in Table 9 which was deposited with the American Type Culture Collection and given the ATCC Deposit Numbers shown above for said cDNA library identifier in Table 2.

10 Also preferred is an isolated polypeptide comprising an amino acid sequence at least 95% identical to a sequence of at least about 30 contiguous amino acids in the amino acid sequence of a protein encoded by a human cDNA clone identified by a cDNA Clone Identifier in Table 1 and contained in a cDNA library shown in Table 9 which was deposited with the American Type Culture Collection and given the ATCC Deposit Numbers shown  
15 above for said cDNA library identifier.

Also preferred is an isolated polypeptide comprising an amino acid sequence at least 95% identical to a sequence of at least about 100 contiguous amino acids in the amino acid sequence of a protein encoded by a human cDNA clone identified by a cDNA Clone Identifier in Table 1 and contained in a cDNA library shown in Table 9 which was deposited  
20 with the American Type Culture Collection and given the ATCC Deposit Numbers shown above for said cDNA library identifier.

Also preferred is an isolated polypeptide comprising an amino acid sequence at least 95% identical to the amino acid sequence of a protein encoded by a human cDNA clone identified by a cDNA Clone Identifier in Table 1 and contained in a cDNA library shown in  
25 Table 9 which was deposited with the American Type Culture Collection and given the ATCC Deposit Numbers shown above for said cDNA library identifier.

Further preferred is an isolated antibody which binds specifically to a polypeptide comprising an amino acid sequence that is at least 90% identical to a sequence of at least 10 contiguous amino acids in a sequence selected from the group consisting of: an amino acid  
30 sequence of SEQ ID NO:Y wherein Y is any integer as defined in Table 1; and a complete amino acid sequence of a protein encoded by a human cDNA clone identified by a cDNA Clone Identifier in Table 1 and contained in a cDNA library shown in Table 9 which was

deposited with the American Type Culture Collection and given the ATCC Deposit Numbers shown above for said cDNA library identifier.

Further preferred is a method for detecting in a biological sample a polypeptide comprising an amino acid sequence which is at least 90% identical to a sequence of at least  
5 10 contiguous amino acids in a sequence selected from the group consisting of: an amino acid sequence of SEQ ID NO:Y wherein Y is any integer as defined in Table 1; and a complete amino acid sequence of a protein encoded by a human cDNA clone identified by a cDNA Clone Identifier in Table 1 and contained in a cDNA library shown in Table 9 which was deposited with the American Type Culture Collection and given the ATCC Deposit  
10 Numbers shown above for said cDNA library identifier; which method comprises a step of comparing an amino acid sequence of at least one polypeptide molecule in said sample with a sequence selected from said group and determining whether the sequence of said polypeptide molecule in said sample is at least 90% identical to said sequence of at least 10 contiguous amino acids.

Also preferred is the above method wherein said step of comparing an amino acid  
15 sequence of at least one polypeptide molecule in said sample with a sequence selected from said group comprises determining the extent of specific binding of polypeptides in said sample to an antibody which binds specifically to a polypeptide comprising an amino acid sequence that is at least 90% identical to a sequence of at least 10 contiguous amino acids in  
20 a sequence selected from the group consisting of: an amino acid sequence of SEQ ID NO:Y wherein Y is any integer as defined in Table 1; and a complete amino acid sequence of a protein encoded by a human cDNA clone identified by a cDNA Clone Identifier in Table 1 and contained in a cDNA library shown in Table 9 which was deposited with the American Type Culture Collection and given the ATCC Deposit Numbers shown above for said cDNA  
25 library identifier.

Also preferred is the above method wherein said step of comparing sequences is performed by comparing the amino acid sequence determined from a polypeptide molecule in said sample with said sequence selected from said group.

Also preferred is a method for identifying the species, tissue or cell type of a  
30 biological sample which method comprises a step of detecting polypeptide molecules in said sample, if any, comprising an amino acid sequence that is at least 90% identical to a sequence of at least 10 contiguous amino acids in a sequence selected from the group consisting of: an

amino acid sequence of SEQ ID NO:Y wherein Y is any integer as defined in Table 1; and a complete amino acid sequence of a protein encoded by a human cDNA clone identified by a cDNA Clone Identifier in Table 1 and contained in a cDNA library shown in Table 9 which was deposited with the American Type Culture Collection and given the  
5 ATCC Deposit Numbers shown above for said cDNA library identifier.

Also preferred is the above method for identifying the species, tissue or cell type of a biological sample, which method comprises a step of detecting polypeptide molecules comprising an amino acid sequence in a panel of at least two amino acid sequences, wherein at least one sequence in said panel is at least 90% identical to a sequence of at least 10  
10 contiguous amino acids in a sequence selected from the above group.

Also preferred is a method for diagnosing in a subject a pathological condition associated with abnormal structure or expression of a gene encoding a protein identified in Table 1, which method comprises a step of detecting in a biological sample obtained from said subject polypeptide molecules comprising an amino acid sequence in a panel of at least  
15 two amino acid sequences, wherein at least one sequence in said panel is at least 90% identical to a sequence of at least 10 contiguous amino acids in a sequence selected from the group consisting of: an amino acid sequence of SEQ ID NO:Y wherein Y is any integer as defined in Table 1; and a complete amino acid sequence of a protein encoded by a human cDNA clone identified by a cDNA Clone Identifier in Table 1 and contained in a cDNA  
20 library shown in Table 9 which was deposited with the American Type Culture Collection and given the ATCC Deposit Numbers shown above for said cDNA library identifier.

In any of these methods, the step of detecting said polypeptide molecules includes using an antibody.

Also preferred is an isolated nucleic acid molecule comprising a nucleotide sequence  
25 which is at least 95% identical to a nucleotide sequence encoding a polypeptide wherein said polypeptide comprises an amino acid sequence that is at least 90% identical to a sequence of at least 10 contiguous amino acids in a sequence selected from the group consisting of: an amino acid sequence of SEQ ID NO:Y wherein Y is any integer as defined in Table 1; and a complete amino acid sequence of a protein encoded by a human cDNA clone identified by a  
30 cDNA Clone Identifier in Table 1 and contained in a cDNA library shown in Table 9 which was deposited with the American Type Culture Collection and given the ATCC Deposit Numbers shown above for said cDNA library identifier.

Also preferred is an isolated nucleic acid molecule, wherein said nucleotide sequence encoding a polypeptide has been optimized for expression of said polypeptide in a prokaryotic host.

Also preferred is an isolated nucleic acid molecule, wherein said polypeptide  
5 comprises an amino acid sequence selected from the group consisting of: an amino acid sequence of SEQ ID NO:Y wherein Y is any integer as defined in Table 1; and a complete amino acid sequence of a protein encoded by a human cDNA clone identified by a cDNA Clone Identifier in Table 1 and contained in a cDNA library shown in Table 9 which was deposited with the American Type Culture Collection and given the ATCC Deposit Numbers  
10 shown above for said cDNA library identifier.

Further preferred is a method of making a recombinant vector comprising inserting any of the above isolated nucleic acid molecule into a vector. Also preferred is the recombinant vector produced by this method. Also preferred is a method of making a recombinant host cell comprising introducing the vector into a host cell, as well as the  
15 recombinant host cell produced by this method.

Also preferred is a method of making an isolated polypeptide comprising culturing this recombinant host cell under conditions such that said polypeptide is expressed and recovering said polypeptide. Also preferred is this method of making an isolated polypeptide, wherein said recombinant host cell is a eukaryotic cell and said polypeptide is a  
20 human protein comprising an amino acid sequence selected from the group consisting of: an amino acid sequence of SEQ ID NO:Y beginning with the residue at the position of the First Amino Acid of the Protein of SEQ ID NO:Y wherein Y is an integer set forth in Table 1 and said position of the First Amino Acid of the Protein of SEQ ID NO:Y is defined in Table 1; and an amino acid sequence of a protein encoded by a human cDNA clone identified by a  
25 cDNA Clone Identifier in Table 1 and contained in a cDNA library shown in Table 9 which was deposited with the American Type Culture Collection and given the ATCC Deposit Numbers shown above for said cDNA library identifier.

Also preferred is a method of treatment of an individual in need of an increased level of a protein activity, which method comprises administering to such an individual a  
30 Therapeutic comprising an amount of an isolated polypeptide, polynucleotide, immunogenic fragment or analogue thereof, binding agent, antibody, or antigen binding fragment of the claimed invention effective to increase the level of said protein activity in said individual.



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Also preferred is a method of treatment of an individual in need of a decreased level of a protein activity, which method comprises administering to such an individual a Therapeutic comprising an amount of an isolated polypeptide, polynucleotide, immunogenic fragment or analogue thereof, binding agent, antibody, or antigen binding  
5 fragment of the claimed invention effective to decrease the level of said protein activity in said individual.

Also preferred is a method of treatment of an individual in need of a specific delivery of toxic compositions to diseased cells (e.g., including, but not limited to, colon or colon cancer cells or tissues), which method comprises administering to such an individual a  
10 Therapeutic comprising an amount of an isolated polypeptide of the invention, including, but not limited to a binding agent, or antibody of the claimed invention that are associated with toxin or cytotoxic prodrugs.

Having generally described the invention, the same will be more readily understood by reference to the following examples, which are provided by way of illustration and are not  
15 intended as limiting.

### ***Examples***

#### ***Example 1: Isolation of a Selected cDNA Clone From the Deposited Sample***

Each cDNA clone in a cited ATCC deposit is contained in a plasmid vector. Table 9 identifies the vectors used to construct the cDNA library from which each clone was isolated.

Table 9.

LIBRARIES DEPOSITED	VECTOR	ATCC DEPOSIT NO.
HASA	Uni-ZAP XR	LP03
HFCA HFCD HFCE HFCF	Uni-ZAP XR	LP13
HFKE	Uni-ZAP XR	LP13
HE8A HE8B HE8C HE8D HE8E HE8F HE8N HE8O HE8P HE8Q HE8T HE8U	Uni-ZAP XR	LP03
HGBA HGBG HGBH	Uni-ZAP XR	LP13
HGBB	Uni-ZAP XR	LP03
HHFA	pBluescript	NA
HLHA HLHB HLHC HLHD HLHE HLHG	Uni-ZAP XR	LP03
HOOA	pBluescript	NA
HPLB	Uni-ZAP XR	NA
HPMD HPME HPMF	Uni-ZAP XR	LP03
HPRA	Uni-ZAP XR	LP13
HSIA HSIC HSID HSIE	Uni-ZAP XR	LP03
HTEA HTEB HTEC HTED HTEE HTEF HTEG HTEH HTEJ HTEK	Uni-ZAP XR	LP13
HTPA HTPC	Uni-ZAP XR	LP03
HTTB HTTC HTTD HTTE HTTF	Uni-ZAP XR	LP13
HAPA HAPC	Uni-ZAP XR	LP03
HETA HETB HETC HETD HETG HETH HETI HETJ	Uni-ZAP XR	LP03
HHFB HHFC HHFG HHFH HHFI	Uni-ZAP XR	LP13
HHPE HHPG	Uni-ZAP XR	LP03
HCE1 HCE2 HCE3 HCE4 HCEC HCED HCEE HCEF HCEI HCEM HCEN HCEO HCEP	Uni-ZAP XR	LP03
HUVC HUVD	Uni-ZAP XR	LP13
HUKB HUKF	Lamda ZAP II	LP13
HTHC HTHD	Uni-ZAP XR	LP13
HSTA	Uni-ZAP XR	LP13
HTAE	Uni-ZAP XR	LP13
HLEA	Uni-ZAP XR	PA005 Phage
HFEA HFEB	Uni-ZAP XR	LP13
HJPA HJPC	Uni-ZAP XR	LP13
HCNA	Lambda ZAP II	LP01
HTSG	pBS	LP05
HLTA HLTB HLTC HLTD HLTE	Uni-ZAP XR	LP03
HAHS	pBluescript	LP13
HALS	Uni-ZAP XR	LP13
HE6B HE6F HE6G	Uni-ZAP XR	LP04
HF6S	pBluescript	LP13
HPMS	pBluescript	LP03
HTYS	pBluescript	NA
HRDB HRDD HRDE HRDF	Uni-ZAP XR	LP03
HCAB	Uni-ZAP XR	LP13
HL3A	Uni-ZAP XR	PA005 Phage
HRGD	Uni-ZAP XR	LP13
HSSE HSSG HSSJ	Uni-ZAP XR	LP04
HSUA HSUB	Uni-ZAP XR	LP03
HT3A	Uni-ZAP XR	NA

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LIBRARIES DEPOSITED	VECTOR	ATCC DEPOSIT NO.
HT4C	Uni-ZAP XR	LP03
HE9F HE9H HE9M HE9N HE9O HE9P HE9Q HE9R HE9S HE9T	Uni-ZAP XR	LP13
HEPA HEPB	Uni-ZAP XR	LP04
HSFA	Uni-ZAP XR	LP13
HATA HATB HATC HATE	Uni-ZAP XR	LP13
HT3B	Uni-ZAP XR	PA005 Phage
HSNA	Uni-ZAP XR	LP04
HPFC	Uni-ZAP XR	LP04
HE2A HE2D HE2E HE2H HE2I HE2O	Uni-ZAP XR	LP13
HE2B HE2C HE2F HE2P	Uni-ZAP XR	LP13
HCBB	Uni-ZAP XR	NA
HFGA	Uni-ZAP XR	LP03
HNEA HNED	Uni-ZAP XR	LP13
HBGB	Uni-ZAP XR	LP03
HKCA	Uni-ZAP XR	PA005 Phage
HKLA	Lambda ZAP II	PA005 Phage
HBNA	Uni-ZAP XR	LP03
HCET	pBluescript	PA005 Phage
HKCS HKCU	pBluescript	LP03
HKCT	pBluescript	PA005 Phage
HLIS	pBluescript	LP13
HLHS HLHT	pBluescript	LP13
HPRT	pBluescript	PA005 Phage
HPTT	Uni-ZAP XR	LP13
HRGS	pBluescript	LP03
HSUS	pBluescript	LP13
HT2S	Uni-ZAP XR	NA
HCNS	pBluescript	PA005 Phage
HCNU	pBluescript	PA005 Phage
HKLR	pBluescript	PA005 Phage
HKLS	pBluescript	PA005 Phage
HKTA	Uni-ZAP XR	PA005 Phage
HHFU	pBluescript	NA
HE8S	Uni-ZAP XR	LP03
HCDC HCDE	Uni-ZAP XR	LP03
HOAA	Uni-ZAP XR	LP13
HTLA HTLD HTLE	Uni-ZAP XR	LP03
HLMD	Uni-ZAP XR	PA005 Phage
HLMI HLMM	Lambda Zap II	LP01

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LIBRARIES DEPOSITED	VECTOR	ATCC DEPOSIT NO.
H6EA H6EB	Uni-ZAP XR	LP03
HCEV HCEY	Uni-ZAP XR	LP03
HCQA HCQB	Lambda Zap II	LP01
HTOA HTOD HTOH HTOJ	Uni-ZAP XR	LP13
HTXC HTXF	Uni-ZAP XR	LP03
HMEC HMEE HMEG HMEI HMEK	Lambda Zap II	LP01
HMEB	Lambda Zap II	LP13
HNFE HNFF HNFG HNFH	Uni-ZAP XR	LP03
HKEA	ZAP express	PA005 Phage
HMGB	Uni-ZAP XR	LP13
HMHB	Uni-ZAP XR	PA005 Phage
HAUA HAUB	Uni-ZAP XR	LP13
HAQB	Uni-ZAP XR	LP13
HCWH	ZAP express	LP02
HCUC	ZAP express	LP02
HSVB HSVC	Uni-ZAP XR	LP03
HPXA	pBluescript	NA
HBJE HBJF HBJJ HBJM	Uni-ZAP XR	LP13
HCRB	Uni-ZAP XR	LP03
HODA HODB HODC HODD	Uni-ZAP XR	LP13
HDSA	Uni-ZAP XR	LP03
HLQA HLQB	Lambda Zap II	LP01
HHGC HHGD	Lambda Zap II	LP01
HCPA	Uni-ZAP XR	LP13
IIMWA HMWB HMWD HMWF HMWH HMWI	Uni-ZAP XR	LP03
HERA	Uni-ZAP XR	LP13
HGLA	Uni-ZAP XR	LP13
HWTB HWTC	Uni-ZAP XR	LP13
HLLC	pCMVSPORT1	PA005 DNA
HLIB HLIC	pCMVSPORT1	LP12
HKDB	pCMVSPORT1	NA
HRKA	pBluescript	PA005 Phage
HOSX	pBluescript	PA005 Phage
HEAA	Uni-ZAP XR	LP13
HBCB HBCC	Uni-ZAP XR	LP21
HHBE HBBF HBBH	pCMVSPORT1	LP12
HBBB	pCMVSPORT1	LP12
HLJB HLJD HLJE	pCMVSPORT1	LP12
HSEB	pCMVSPORT1	NA
HNAA	pSPORT1	NA
HBSA	Uni-ZAP XR	LP04
HBBM	pCMVSPORT1	NA
HADM	pBluescript	NA
HMKA HMKC	pSPORT1	LP12
HFVH HFVI HFVJ HFVK	pBluescript	LP03
HKIM	Lambda Zap II	PA005 Phage

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LIBRARIES DEPOSITED	VECTOR	ATCC DEPOSIT NO.
HCUD HCUE HCUG	ZAP express	LP02
HKIS	pBluescript	NA
HSDS	pBluescript	LP13
HBAG HBAH	pSport1	NA
HUSG HUSI HUSJ	pSport1	LP10
HUSX HUSY HUSZ	pSport1	LP10
HOFM	pCMVSPORT 2.0	LP07
HNFI	pBluescript	LP03
HBMH HBMD	pBluescript	LP03
HCFB HCFC HCFD	pSport1	LP12
HCFL HCFM HCFN HCFO	pSport1	LP12
HPTW	pBluescript	PA005 Phage
HADC HADF	pSport1	LP10
HOVA HOVC HOVD HOVE	pSport1	LP10
HKML HKMM	pBluescript	LP03
HUSF	pBluescript	NA
HOGA HOGB HOGC HOGD HOGE	pCMVSPORT 2.0	LP12
HTWB HTWC HTWD HTWE HTWF	pSport1	LP10
HBXF	ZAP express	LP02
HEOA	pBluescript	PA005 DNA
HSDX	pBluescript	LP13
HMMA	pSport1	LP12
HLA HLYB HLYC HLYD HLYE HLYG	pSport1	LP10
HCGL	pCMVSPORT 2.0	LP07
HSDZ	pBluescript	LP13
HEON HEOQ HEOS	pSport1	LP10
HCGB	pSport1	LP10
HADT	pBluescript	NA
HTDA	pSport1	LP12
HSPA HSPB	pSport1	LP10
HSPM	pSport1	LP10
HCHA HCHB HCHC	pSport1	LP10
HCHM HCHO	pSport1	LP10
HDLA	pCMVSPORT 2.0	LP07
HDTA HDTB HDTD HDTE HDTG HDTH HDTI HDTJ HDTK HDTL HDTM	pCMVSPORT 2.0	LP07
HTJM HTJN	pCMVSPORT 2.0	LP12
HCIA	pSport1	LP10
H6BS	Uni-ZAP XR	LP03
HKAA HKAB HKAC HKAD HKAE HKAF HKAH HKAJ HKAK HKAQ	pCMVSPORT 2.0	LP07
HDAA HDAB HDAC	pSport1	LP10
HUFA HUFH HUFJ HUFF	pSport1	LP10
HLDB HLDC HLDD	pCMVSPORT 3.0	LP08

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LIBRARIES DEPOSITED	VECTOR	ATCC DEPOSIT NO.
HLDN HLDO	pCMVSPORT 3.0	LP08
HNDA	pCMVSPORT 2.0	LP07
HMTA HMTB	pCMVSPORT 3.0	LP08
HNTA HNTB HNTC HNTD HNT E	pCMVSPORT 3.0	LP08
HNTM	pSPORT1	LP10
HDP A HDPB HDPC HDPF HDPG HDPH HDPI HDPJ HDPK HDPL HDPR HDPS HDPT HDPU HDPW HDPX HDQD HDQE HDQF HDQG HDQH	pCMVSPORT 3.0	LP08
HDPM HDPO HDPP HDPPQ HDQP	pCMVSPORT 3.0	LP08
HMTM	PCR II	LP09
HLDX	pSPORT1	LP10
HMUB	pCMVSPORT 3.0	LP08
HULA HULC	pSPORT1	LP10
HFNA	pSPORT1	LP10
HKGA HKGB HKGC HKGD	pSPORT1	LP10
HISA HISB HISC HISD HISE	pSPORT1	LP10
HLSA	pSPORT1	LP10
HHEA HHEB HHEC HHED HHEE HHEF HHEG HHEH HHEI HHEJ	pCMVSPORT 3.0	LP08
HHEM HHEN HHEP HHEQ HHER HHET HHEU HHEV HHEW HHEX HHEY HHEZ	pCMVSPORT 3.0	LP08
HEQA	pCMVSPORT 3.0	LP08
HJMA HJMB	pCMVSPORT 3.0	LP08
HSWB	pCMVSPORT 3.0	LP08
HNTR HNTS HNTT	pSPORT1	NA
HEEA	Uni-ZAP XR	NA
HEGA	Uni-ZAP XR	NA
HSYA HSYB HSYD HSYE	pCMVSPORT 3.0	LP08
HLWA HLWB HLWC	pCMVSPORT 3.0	LP08
HRAA HRAB HRAC HRAE	pCMVSPORT 3.0	LP08
HTXJ HTXK HTXL HTXM HTXO HTXP HTXQ HTXR HTXS	Uni-ZAP XR	LP03
H6ED	Uni-ZAP XR	LP03
HAMF HAMG	pCMVSPORT 3.0	LP12
HAJA HAJB	pCMVSPORT 3.0	LP12
HDFU	pCMVSPORT 2.0	NA
HDHE	pCMVSPORT 2.0	NA
HLQD HLQE HLQF	Lamda ZAP II	LP13

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LIBRARIES DEPOSITED	VECTOR	ATCC DEPOSIT NO.
HAPN HAPO HAPQ HAPR	Uni-ZAP XR	LP13
HWBA HWBB HWBC HWBD HWBE HWBF	pCMVSPORT 3.0	LP12
HWAA HWAB HWAC HWAD HWAG HWAI	pCMVSPORT 3.0	LP12
HYAA HYAB HYAC	pCMVSPORT 3.0	LP12
HWHG HWHH	pCMVSPORT 3.0	LP12
HWHP HWHQ	pCMVSPORT 3.0	LP12
HCWU	ZAP Express	LP13
HSIF HSIG	Uni-ZAP XR	PA005 Phage
HLTG HLTH HLTJ	Uni-ZAP XR	LP13
HARM HARN	pCMVSPORT 3.0	LP12
HBIM HBIN HBIO HBIP	pCMVSPORT 3.0	LP12
HSOB HSOD	Uni-ZAP XR	LP03
HCQC HCQD	Lambda ZAP II	LP01
HCNC HCND	Lambda ZAP II	LP01
HROB HROD	Uni-ZAP XR	LP03
HAHC	Uni-ZAP XR	LP13
HWDA	pCMVSPORT 3.0	LP12
HODE HODF HODG	Uni-ZAP XR	LP03
HTEL HTEP	Uni-ZAP XR	LP03
HBGM HBGN	Uni-ZAP XR	LP03
HTLG HTLH	Uni-ZAP XR	LP03
HHFJ HHFL HHFM	Uni-ZAP XR	LP03
HFKH HFKI HFKM	Uni-ZAP XR	LP03
HTPF HTPG HTPH HTPJ	Uni-ZAP XR	LP03
HUVF HUVG HUVH	Uni-ZAP XR	LP03
HE2J HE2L HE2R HE2T	Uni-ZAP XR	LP04
HS2A	pSport1	LP16
HS2S	pSport1	LP16
HLQG	Lambda Zap II	LP01
HA5A HA5B	pSport1	LP16
HTTI HTTK	Uni-ZAP XR	LP03
HTAH	Uni-ZAP XR	LP03
HDDN	pSport1	LP22
HPCI	Lambda Zap- CMV XR	LP21
HPCR	Lambda Zap- CMV XR	LP22
HPMK HPML	Uni-ZAP XR	LP03
HHFO	Uni-ZAP XR	LP03
HAAA	pSport1	LP22
HOOH	pSport1	LP22
HIDA	pSport1	LP22
HNOA	pSport1	LP22

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LIBRARIES DEPOSITED	VECTOR	ATCC DEPOSIT NO.
HUUA	pTriplEx2	LP22
HPDO	pSport1	PA005 DNA
HPCO	pSport1	PA005 DNA
HOCM	pSport1	PA005 DNA
HNBT	pSport1	PA005 DNA
HBCJ	pSport1	PA005 DNA
HSAM	pSport1	PA005 DNA
HFXA HFXH	Lambda ZAP II	LP01
HMSA HMSC HMSD HMSF HMSG HMSH HMSI HMSJ	Uni-ZAP XR	LP03
HOSA HOSB HOSD HOSM HOSN HOSO HOSP	Uni ZAP XR	LP04
HEBA HEBB HEBF HEBG	Uni ZAP XR	NA
HAGB HAGD HAGE HAGF	Uni-ZAP XR	LP13
HSRA HSRB	Uni-ZAP XR	LP03
HPVA	Uni ZAP XR	PA005 Phage
HKIA	Uni ZAP XR	PA005 Phage
HKMA	Uni ZAP XR	NA
HSRF	Uni-ZAP XR	LP03
HSQD HSQF	Uni-ZAP XR	LP03
HSKE HSKZ	Uni-ZAP XR	LP03
HSLE HSLF HSLG HSLH	Uni-ZAP XR	LP03
HSDE HSDH	Uni-ZAP XR	LP03
HSXA HSXB HSXD	Uni-ZAP XR	LP04
HSHA HSHB	Uni-ZAP XR	LP13
HBXA HBXB HBXC	ZAP Express	LP13
HOUA HOUD	Uni-ZAP XR	LP04
HPWA HPWB HPWC	Uni-ZAP XR	LP13
HELB HELG HELH	Uni-ZAP XR	LP04
HEMF HEMG	Uni-ZAP XR	LP04
HBIB	Uni-ZAP XR	LP04
HFRA HFRB	Uni ZAP XR	PA005 Phage
HHSB HHSD	Uni-ZAP XR	LP04
HNGB HNGE HNGG HNGI	Uni-ZAP XR	LP04
HNHD HNHE HNHH	Uni-ZAP XR	LP04
HADB	Uni ZAP XR	NA
HSAX HSAW HSAX HSAZ	Uni-ZAP XR	LP04
HBMS HBMT HBMV HBMX	Uni-ZAP XR	LP04
HOBA	pBluescript	PA005 Phage
HOEE HOEF HOEK HOEL HOEM HOEN HOEO	Uni ZAP XR	PA005 Phage
HAIB HAIC HAID	Uni-ZAP XR	LP04
HTGA HTGB	Uni-ZAP XR	LP04
HEIB HEIC	Uni ZAP XR	NA



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LIBRARIES DEPOSITED	VECTOR	ATCC DEPOSIT NO.
HMCD	Uni-ZAP XR	LP04
HPCA	Uni ZAP XR	NA
HPHA	Uni-ZAP XR	LP04
HPIA HPIC	Uni-ZAP XR	LP13
HPJA HPJB HPJC HPJE	Uni-ZAP XR	LP13
HFIA HFIB HFIC	pSport1	LP10
HFIH HFII HFIJ	pSport1	LP10
HFIU	pSport1	LP10
HSKX	pBluescript	LP03
HGCO	pSport1	NA
HMVA HNVB HMVC HMVD	pSport1	LP10
HOSE HOSF	Uni-ZAP XR	LP04
HNHN HNHO	Uni ZAP XR	LP04
HTGE HTGF	Uni-ZAP XR	LP04
HFPB HFPC HFPE HFPF HFPH HFPI HFPJ HFPK	Uni-ZAP XR	LP03
HFIX HFIY HFIZ	pSport1	LP10
HOHA HOHB HOHC HOHE	pCMVSPORT 2.0	LP07
HSDJ HSDK	Uni-ZAP XR	LP03
HFOX HFOY	pSport1	LP10
HMAH HMAJ HMAK HMAM	Uni-ZAP XR	LP04
HACB HACC	Uni-ZAP XR	LP04
HFXK	Lambda ZAP II	PA005 Phage
HFAT	Uni ZAP XR	PA005 Phage
IIANG	pSport1	NA
HOUH	Uni ZAP XR	NA
HMCF HMCB HMCH HMCJ	Uni-ZAP XR	LP13
HWLE HWLF HWLG HWLH HWMA	pSport1	LP14
HCRM HCRN HCRO HCRP HCRQ	pSport1	LP14
HWLI HWLJ HWLK HWLL HWMF	pSport1	LP14
HWLQ HWLR HWLU HWLV HWLW HWLX	pSport1	LP14
HBOD HBOE	pSport1	LP14
HBKD	pSport1	LP14
HWLA HWLC HWLD HWLP	pSport1	LP14
HWLM HWLN HWLO HWMB HWMC	pSport1	LP14
HVAA	pSport1	LP12
HBWC	ZAP express	LP13
HHSF HHSG	Uni ZAP XR	LP04
HSLJ	Uni ZAP XR	NA
HAQN	pSport1	LP14
HASM	pSport1	LP14
HCDM	pSport1	LP14
HFDN	pSport1	LP14
HGAM	pSport1	LP14
HHMM	pSport1	LP14
HAVM	pT-Adv	LP14
HAVT	pT-Adv	LP14
HHAT HHAU	pT-Adv	LP14
HUCN HUCO HUCP HUCQ	pSport1	LP20
HHAO	pCMVSPORT	LP15

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LIBRARIES DEPOSITED	VECTOR	ATCC DEPOSIT NO.
	3.0	
HTFN	pSport1	LP16
HMSM HMSO HMSP	Uni ZAP XR	PA005 Phage
HEPN	pSport1	LP20
HPSN	pSport1	LP20
HNSA	pSport1	LP20
HNSM	pSport1	LP20
HOCN	pSport1	LP20
HOCT	pSport1	LP20
HLXN	pSport1	LP20
HTYN	pSport1	LP20
HZAA	pSport1	LP20
HINA	pSport1	LP16
HRMA	pSport1	LP16
HSKI HSKJ HSKK	pBluescript	LP03
HACA	Uni-ZAP XR	LP13
HFAA HFAC HFAD	Uni-ZAP XR	LP04
HFAM	Uni-ZAP XR	LP04
HMIA HMIB	Uni-ZAP XR	LP04
HILB HILC	pBluescript SK-	PA005 Phage
HPBE	pBluescript SK-	LP13
HIBC HIBE	Other	NA
HPDD	pBluescript SK-	NA
HSAA HSAB HSAC	pBluescript	LP05
HSBA	pBluescript SK-	LP13
HJAA HJAC	pBluescript SK-	LP13
HJBA HJBC	pBluescript SK-	LP13
HAFB	pBS	LP05
HTNA HTNB	pBluescript SK-	LP13
HONA	pBluescript	LP05
HBMA	pBluescript SK-	NA
HARA	pBluescript	LP05
H2CA	pBluescript SK-	NA
H2MA	pBluescript SK-	NA
H2MB H2MC	pBluescript SK-	PA005 Phage
H2CB	pBluescript SK-	PA005 Phage
HCYA	pBluescript SK-	NA
HCYB	pBluescript	PA005

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LIBRARIES DEPOSITED	VECTOR	ATCC DEPOSIT NO.
H2LA H2LB	SK- pBluescript SK-	Phage PA005 Phage

In many cases, the vector used to construct the library is a phage vector from which a plasmid has been excised. The table immediately below correlates the related plasmid for each phage vector used in constructing the cDNA library. For example, where a particular clone is identified in Table 1 as being isolated in the vector "Lambda Zap," the corresponding deposited clone is in "pBluescript."

	<u>Vector Used to Construct Library</u>	<u>Corresponding Deposited Plasmid</u>
	Lambda Zap	pBluescript (pBS)
	Uni-Zap XR	pBluescript (pBS)
10	Zap Express	pBK
	lafmid BA	plafmid BA
	pSport1	pSport1
	pCMVSPORT 2.0	pCMVSPORT 2.0
	pCMVSPORT 3.0	pCMVSPORT 3.0
15	pCR <sup>®</sup> 2.1	pCR <sup>®</sup> 2.1

Vectors Lambda Zap (U.S. Patent Nos. 5,128,256 and 5,286,636), Uni-Zap XR (U.S. Patent Nos. 5,128,256 and 5,286,636), Zap Express (U.S. Patent Nos. 5,128,256 and 5,286,636), pBluescript (pBS) (Short, J. M. et al., Nucleic Acids Res. 16:7583-7600 (1988); Altting-Mees, M. A. and Short, J. M., Nucleic Acids Res. 17:9494 (1989)) and pBK (Altting-Mees, M. A. et al., Strategies 5:58-61 (1992)) are commercially available from Stratagene Cloning Systems, Inc., 11011 N. Torrey Pines Road, La Jolla, CA, 92037. pBS contains an ampicillin resistance gene and pBK contains a neomycin resistance gene. Both can be transformed into E. coli strain XL-1 Blue, also available from Stratagene. pBS comes in 4 forms SK+, SK-, KS+ and KS-. The S and K refers to the orientation of the polylinker to the T7 and T3 primer sequences which flank the polylinker region ("S" is for SacI and "K" is for KpnI which are the first sites on each respective end of the linker). "+" or "-" refer to the orientation of the fl origin of replication ("ori"), such that in one orientation, single stranded rescue initiated from the fl ori generates sense strand DNA and in the other, antisense.

Vectors pSport1, pCMVSPORT 2.0 and pCMVSPORT 3.0, were obtained from Life Technologies, Inc., P. O. Box 6009, Gaithersburg, MD 20897. All Sport vectors contain an ampicillin resistance gene and may be transformed into E. coli strain DH10B, also available from Life Technologies. (See, for instance, Gruber, C. E., et al., Focus 15:59 (1993).)

Vector lafmid BA (Bento Soares, Columbia University, NY) contains an ampicillin resistance gene and can be transformed into E. coli strain XL-1 Blue. Vector pCR<sup>®</sup>2.1, which is available from Invitrogen, 1600 Faraday Avenue, Carlsbad, CA 92008, contains an ampicillin resistance gene and may be transformed into E. coli strain DH10B, available from  
5 Life Technologies. (See, for instance, Clark, J. M., Nuc. Acids Res. 16:9677-9686 (1988) and Mead, D. et al., Bio/Technology 9: (1991).) Preferably, a polynucleotide of the present invention does not comprise the phage vector sequences identified for the particular clone in Table 1, as well as the corresponding plasmid vector sequences designated above.

The deposited material in the sample assigned the ATCC Deposit Number cited in  
10 Table 2 for any given cDNA clone also may contain one or more additional plasmids, each comprising a cDNA clone different from that given clone. Thus, deposits sharing the same ATCC Deposit Number contain at least a plasmid for each cDNA clone identified in Table 1. Typically, each ATCC deposit sample cited in Table 2 comprises a mixture of approximately equal amounts (by weight) of about 50 plasmid DNAs, each containing a different cDNA  
15 clone; but such a deposit sample may include plasmids for more or less than 50 cDNA clones, up to about 500 cDNA clones.

Two approaches can be used to isolate a particular clone from the deposited sample of plasmid DNAs cited for that library in Table 2 and 9. First, a plasmid is directly isolated by screening the libraries using a polynucleotide probe corresponding to SEQ ID NO:X.

20 Particularly, a specific polynucleotide with 30-40 nucleotides is synthesized using an Applied Biosystems DNA synthesizer according to the sequence reported. The oligonucleotide is labeled, for instance, with <sup>32</sup>P-γ-ATP using T4 polynucleotide kinase and purified according to routine methods. (E.g., Maniatis et al., Molecular Cloning: A Laboratory Manual, Cold Spring Harbor Press, Cold Spring, NY (1982).) The plasmid  
25 mixture is transformed into a suitable host, as indicated above (such as XL-1 Blue (Stratagene)) using techniques known to those of skill in the art, such as those provided by the vector supplier or in related publications or patents cited above. The transformants are plated on 1.5% agar plates (containing the appropriate selection agent, e.g., ampicillin) to a density of about 150 transformants (colonies) per plate. These plates are screened using  
30 Nylon membranes according to routine methods for bacterial colony screening (e.g., Sambrook et al., Molecular Cloning: A Laboratory Manual, 2nd Edit., (1989), Cold Spring

Harbor Laboratory Press, pages 1.93 to 1.104), or other techniques known to those of skill in the art.

Alternatively, two primers of 17-20 nucleotides derived from both ends of the SEQ ID NO:X (i.e., within the region of SEQ ID NO:X bounded by the 5' NT and the 3' NT of the clone defined in Table 1) are synthesized and used to amplify the desired cDNA using the deposited cDNA plasmid as a template. The polymerase chain reaction is carried out under routine conditions, for instance, in 25  $\mu$ l of reaction mixture with 0.5  $\mu$ g of the above cDNA template. A convenient reaction mixture is 1.5-5 mM  $MgCl_2$ , 0.01% (w/v) gelatin, 20  $\mu$ M each of dATP, dCTP, dGTP, dTTP, 25 pmol of each primer and 0.25 Unit of Taq polymerase. Thirty five cycles of PCR (denaturation at 94°C for 1 min; annealing at 55°C for 1 min; elongation at 72°C for 1 min) are performed with a Perkin-Elmer Cetus automated thermal cycler. The amplified product is analyzed by agarose gel electrophoresis and the DNA band with expected molecular weight is excised and purified. The PCR product is verified to be the selected sequence by subcloning and sequencing the DNA product.

Several methods are available for the identification of the 5' or 3' non-coding portions of a gene which may not be present in the deposited clone. These methods include but are not limited to, filter probing, clone enrichment using specific probes, and protocols similar or identical to 5' and 3' "RACE" protocols which are well known in the art. For instance, a method similar to 5' RACE is available for generating the missing 5' end of a desired full-length transcript. (Fromont-Racine et al., Nucleic Acids Res. 21(7):1683-1684 (1993).)

Briefly, a specific RNA oligonucleotide is ligated to the 5' ends of a population of RNA presumably containing full-length gene RNA transcripts. A primer set containing a primer specific to the ligated RNA oligonucleotide and a primer specific to a known sequence of the gene of interest is used to PCR amplify the 5' portion of the desired full-length gene. This amplified product may then be sequenced and used to generate the full length gene.

This above method starts with total RNA isolated from the desired source, although poly-A<sup>+</sup> RNA can be used. The RNA preparation can then be treated with phosphatase if necessary to eliminate 5' phosphate groups on degraded or damaged RNA which may interfere with the later RNA ligase step. The phosphatase should then be inactivated and the RNA treated with tobacco acid pyrophosphatase in order to remove the cap structure present at the 5' ends of messenger RNAs. This reaction leaves a 5' phosphate group at the 5' end of

the cap cleaved RNA which can then be ligated to an RNA oligonucleotide using T4 RNA ligase.

This modified RNA preparation is used as a template for first strand cDNA synthesis using a gene specific oligonucleotide. The first strand synthesis reaction is used as a template  
5 for PCR amplification of the desired 5' end using a primer specific to the ligated RNA oligonucleotide and a primer specific to the known sequence of the gene of interest. The resultant product is then sequenced and analyzed to confirm that the 5' end sequence belongs to the desired gene.

### 10 ***Example 2: Isolation of Genomic Clones Corresponding to a Polynucleotide***

A human genomic P1 library (Genomic Systems, Inc.) is screened by PCR using primers selected for the cDNA sequence corresponding to SEQ ID NO:X., according to the method described in Example 1. (See also, Sambrook.)

15

### ***Example 3: Tissue specific expression analysis***

The Human Genome Sciences, Inc. (HGS) database is derived from sequencing tissue specific cDNA libraries. Libraries generated from a particular tissue (e.g., those shown in  
20 Table 3 and 5) are selected and the specific tissue expression pattern of EST groups or assembled contigs within these libraries is determined by comparison of the expression patterns of those groups or contigs within the entire database. ESTs which are predicted to have significantly enhances expression in colon or colon cancer tissues were selected.

The original clone from which the specific EST sequence was generated, is obtained  
25 from the catalogued library of clones and the insert amplified by PCR using methods known in the art. The PCR product is denatured then transferred in 96 well format to a nylon membrane (Schleicher and Scheull) generating an array filter of colon and/or colon cancer related clones. Housekeeping genes, maize genes, known tissue specific genes and known membrane localized class I genes are included on the filters as controls. These targets can be  
30 used in signal normalization and to validate assay sensitivity. Additional targets are included to monitor probe length and specificity of hybridization.

Radioactively labeled hybridization probes are generated by first strand cDNA synthesis per the manufacturer's instructions (Life Technologies) from mRNA/RNA samples prepared from the specific tissue being analyzed. The hybridization probes are purified by gel exclusion chromatography, quantitated, and hybridized with the array filters in hybridization bottles at 65°C overnight. The filters are washed under stringent conditions and signals are captured using a Fuji phosphorimager.

Data is extracted using AIS software and following background subtraction, signal normalization is performed. This includes a normalization of filter-wide expression levels between different experimental runs. Genes that are differentially expressed in the tissue of interest are identified and the full length sequence of these clones is generated.

#### ***Example 4: Chromosomal Mapping of the Polynucleotides***

An oligonucleotide primer set is designed according to the sequence at the 5' end of SEQ ID NO:X. This primer preferably spans about 100 nucleotides. This primer set is then used in a polymerase chain reaction under the following set of conditions : 30 seconds, 95°C; 1 minute, 56°C; 1 minute, 70°C. This cycle is repeated 32 times followed by one 5 minute cycle at 70°C. Human, mouse, and hamster DNA is used as template in addition to a somatic cell hybrid panel containing individual chromosomes or chromosome fragments (Bios, Inc). The reactions is analyzed on either 8% polyacrylamide gels or 3.5 % agarose gels. Chromosome mapping is determined by the presence of an approximately 100 bp PCR fragment in the particular somatic cell hybrid.

#### ***Example 5: Bacterial Expression of a Polypeptide***

A polynucleotide encoding a polypeptide of the present invention is amplified using PCR oligonucleotide primers corresponding to the 5' and 3' ends of the DNA sequence, as outlined in Example 1, to synthesize insertion fragments. The primers used to amplify the cDNA insert should preferably contain restriction sites, such as BamHI and XbaI, at the 5' end of the primers in order to clone the amplified product into the expression vector. For example, BamHI and XbaI correspond to the restriction enzyme sites on the bacterial



expression vector pQE-9. (Qiagen, Inc., Chatsworth, CA). This plasmid vector encodes antibiotic resistance (Ampr), a bacterial origin of replication (ori), an IPTG-regulatable promoter/operator (P/O), a ribosome binding site (RBS), a 6-histidine tag (6-His), and restriction enzyme cloning sites.

5        The pQE-9 vector is digested with BamHI and XbaI and the amplified fragment is ligated into the pQE-9 vector maintaining the reading frame initiated at the bacterial RBS. The ligation mixture is then used to transform the E. coli strain M15/rep4 (Qiagen, Inc.) which contains multiple copies of the plasmid pREP4, which expresses the lacI repressor and also confers kanamycin resistance (Kanr). Transformants are identified by their ability to  
10        grow on LB plates and ampicillin/kanamycin resistant colonies are selected. Plasmid DNA is isolated and confirmed by restriction analysis.

Clones containing the desired constructs are grown overnight (O/N) in liquid culture in LB media supplemented with both Amp (100 ug/ml) and Kan (25 ug/ml). The O/N culture is used to inoculate a large culture at a ratio of 1:100 to 1:250. The cells are grown to an optical  
15        density 600 (O.D.<sup>600</sup>) of between 0.4 and 0.6. IPTG (Isopropyl-B-D-thiogalacto pyranoside) is then added to a final concentration of 1 mM. IPTG induces by inactivating the lacI repressor, clearing the P/O leading to increased gene expression.

Cells are grown for an extra 3 to 4 hours. Cells are then harvested by centrifugation (20 mins at 6000Xg). The cell pellet is solubilized in the chaotropic agent 6 Molar  
20        Guanidine HCl by stirring for 3-4 hours at 4°C. The cell debris is removed by centrifugation, and the supernatant containing the polypeptide is loaded onto a nickel-nitrilo-tri-acetic acid ("Ni-NTA") affinity resin column (available from QIAGEN, Inc., *supra*). Proteins with a 6 x His tag bind to the Ni-NTA resin with high affinity and can be purified in a simple one-step procedure (for details see: The QIAexpressionist (1995) QIAGEN, Inc., *supra*).

25        Briefly, the supernatant is loaded onto the column in 6 M guanidine-HCl, pH 8, the column is first washed with 10 volumes of 6 M guanidine-HCl, pH 8, then washed with 10 volumes of 6 M guanidine-HCl pH 6, and finally the polypeptide is eluted with 6 M guanidine-HCl, pH 5.

The purified protein is then renatured by dialyzing it against phosphate-buffered  
30        saline (PBS) or 50 mM Na-acetate, pH 6 buffer plus 200 mM NaCl. Alternatively, the protein can be successfully refolded while immobilized on the Ni-NTA column. The recommended conditions are as follows: renature using a linear 6M-1M urea gradient in 500

mM NaCl, 20% glycerol, 20 mM Tris/HCl pH 7.4, containing protease inhibitors. The renaturation should be performed over a period of 1.5 hours or more. After renaturation the proteins are eluted by the addition of 250 mM imidazole. Imidazole is removed by a final dialyzing step against PBS or 50 mM sodium acetate pH 6 buffer plus 200 mM NaCl.

5 The purified protein is stored at 4° C or frozen at -80° C.

In addition to the above expression vector, the present invention further includes an expression vector comprising phage operator and promoter elements operatively linked to a polynucleotide of the present invention, called pHE4a. (ATCC Accession Number 209645, deposited on February 25, 1998.) This vector contains: 1) a neomycinphosphotransferase  
10 gene as a selection marker, 2) an E. coli origin of replication, 3) a T5 phage promoter sequence, 4) two lac operator sequences, 5) a Shine-Delgarno sequence, and 6) the lactose operon repressor gene (lacIq). The origin of replication (oriC) is derived from pUC19 (LTI, Gaithersburg, MD). The promoter sequence and operator sequences are made synthetically.

DNA can be inserted into the pHEa by restricting the vector with NdeI and XbaI,  
15 BamHI, XhoI, or Asp718, running the restricted product on a gel, and isolating the larger fragment (the stuffer fragment should be about 310 base pairs). The DNA insert is generated according to the PCR protocol described in Example 1, using PCR primers having restriction sites for NdeI (5' primer) and XbaI, BamHI, XhoI, or Asp718 (3' primer). The PCR insert is gel purified and restricted with compatible enzymes. The insert and vector are ligated  
20 according to standard protocols.

The engineered vector could easily be substituted in the above protocol to express protein in a bacterial system.

### ***Example 6: Purification of a Polypeptide from an Inclusion Body***

25

The following alternative method can be used to purify a polypeptide expressed in *E. coli* when it is present in the form of inclusion bodies. Unless otherwise specified, all of the following steps are conducted at 4-10°C.

Upon completion of the production phase of the *E. coli* fermentation, the cell culture  
30 is cooled to 4-10°C and the cells harvested by continuous centrifugation at 15,000 rpm (Heraeus Sepatech). On the basis of the expected yield of protein per unit weight of cell paste and the amount of purified protein required, an appropriate amount of cell paste, by

weight, is suspended in a buffer solution containing 100 mM Tris, 50 mM EDTA, pH 7.4. The cells are dispersed to a homogeneous suspension using a high shear mixer.

The cells are then lysed by passing the solution through a microfluidizer (Microfluidics, Corp. or APV Gaulin, Inc.) twice at 4000-6000 psi. The homogenate is then  
5 mixed with NaCl solution to a final concentration of 0.5 M NaCl, followed by centrifugation at 7000 xg for 15 min. The resultant pellet is washed again using 0.5M NaCl, 100 mM Tris, 50 mM EDTA, pH 7.4.

The resulting washed inclusion bodies are solubilized with 1.5 M guanidine hydrochloride (GuHCl) for 2-4 hours. After 7000 xg centrifugation for 15 min., the pellet is  
10 discarded and the polypeptide containing supernatant is incubated at 4°C overnight to allow further GuHCl extraction.

Following high speed centrifugation (30,000 xg) to remove insoluble particles, the GuHCl solubilized protein is refolded by quickly mixing the GuHCl extract with 20 volumes of buffer containing 50 mM sodium, pH 4.5, 150 mM NaCl, 2 mM EDTA by vigorous  
15 stirring. The refolded diluted protein solution is kept at 4°C without mixing for 12 hours prior to further purification steps.

To clarify the refolded polypeptide solution, a previously prepared tangential filtration unit equipped with 0.16 µm membrane filter with appropriate surface area (e.g., Filtron), equilibrated with 40 mM sodium acetate, pH 6.0 is employed. The filtered sample is  
20 loaded onto a cation exchange resin (e.g., Poros HS-50, Perseptive Biosystems). The column is washed with 40 mM sodium acetate, pH 6.0 and eluted with 250 mM, 500 mM, 1000 mM, and 1500 mM NaCl in the same buffer, in a stepwise manner. The absorbance at 280 nm of the effluent is continuously monitored. Fractions are collected and further analyzed by SDS-PAGE.

25 Fractions containing the polypeptide are then pooled and mixed with 4 volumes of water. The diluted sample is then loaded onto a previously prepared set of tandem columns of strong anion (Poros HQ-50, Perseptive Biosystems) and weak anion (Poros CM-20, Perseptive Biosystems) exchange resins. The columns are equilibrated with 40 mM sodium acetate, pH 6.0. Both columns are washed with 40 mM sodium acetate, pH 6.0, 200 mM  
30 NaCl. The CM-20 column is then eluted using a 10 column volume linear gradient ranging from 0.2 M NaCl, 50 mM sodium acetate, pH 6.0 to 1.0 M NaCl, 50 mM sodium acetate, pH

6.5. Fractions are collected under constant  $A_{280}$  monitoring of the effluent. Fractions containing the polypeptide (determined, for instance, by 16% SDS-PAGE) are then pooled.

The resultant polypeptide should exhibit greater than 95% purity after the above refolding and purification steps. No major contaminant bands should be observed from  
5 Commassie blue stained 16% SDS-PAGE gel when 5  $\mu$ g of purified protein is loaded. The purified protein can also be tested for endotoxin/LPS contamination, and typically the LPS content is less than 0.1 ng/ml according to LAL assays.

### ***Example 7: Cloning and Expression of a Polypeptide in a Baculovirus Expression System***

10

In this example, the plasmid shuttle vector pA2 is used to insert a polynucleotide into a baculovirus to express a polypeptide. This expression vector contains the strong polyhedrin promoter of the *Autographa californica* nuclear polyhedrosis virus (AcMNPV) followed by  
15 convenient restriction sites such as BamHI, Xba I and Asp718. The polyadenylation site of the simian virus 40 ("SV40") is used for efficient polyadenylation. For easy selection of recombinant virus, the plasmid contains the beta-galactosidase gene from *E. coli* under control of a weak *Drosophila* promoter in the same orientation, followed by the polyadenylation signal of the polyhedrin gene. The inserted genes are flanked on both sides  
20 by viral sequences for cell-mediated homologous recombination with wild-type viral DNA to generate a viable virus that express the cloned polynucleotide.

Many other baculovirus vectors can be used in place of the vector above, such as pAc373, pVL941, and pAcIM1, as one skilled in the art would readily appreciate, as long as the construct provides appropriately located signals for transcription, translation, secretion  
25 and the like, including a signal peptide and an in-frame AUG as required. Such vectors are described, for instance, in Luckow et al., *Virology* 170:31-39 (1989).

Specifically, the cDNA sequence contained in the deposited clone, including the AUG initiation codon, is amplified using the PCR protocol described in Example 1. If a naturally occurring signal sequence is used to produce a colon or colon cancer related  
30 polypeptide, the pA2 vector does not need a second signal peptide. Alternatively, the vector can be modified (pA2 GP) to include a baculovirus leader sequence, using the standard methods described in Summers et al., "A Manual of Methods for Baculovirus Vectors and

Insect Cell Culture Procedures," Texas Agricultural Experimental Station Bulletin No. 1555 (1987).

The amplified fragment is isolated from a 1% agarose gel using a commercially available kit ("GeneClean," BIO 101 Inc., La Jolla, Ca.). The fragment then is digested with  
5 appropriate restriction enzymes and again purified on a 1% agarose gel.

The plasmid is digested with the corresponding restriction enzymes and optionally, can be dephosphorylated using calf intestinal phosphatase, using routine procedures known in the art. The DNA is then isolated from a 1% agarose gel using a commercially available kit ("GeneClean" BIO 101 Inc., La Jolla, Ca.).

10 The fragment and the dephosphorylated plasmid are ligated together with T4 DNA ligase. *E. coli* HB101 or other suitable *E. coli* hosts such as XL-1 Blue (Stratagene Cloning Systems, La Jolla, CA) cells are transformed with the ligation mixture and spread on culture plates. Bacteria containing the plasmid are identified by digesting DNA from individual colonies and analyzing the digestion product by gel electrophoresis. The sequence of the  
15 cloned fragment is confirmed by DNA sequencing.

Five  $\mu$ g of a plasmid containing the polynucleotide is co-transfected with 1.0  $\mu$ g of a commercially available linearized baculovirus DNA ("BaculoGold™ baculovirus DNA", Pharmingen, San Diego, CA), using the lipofection method described by Felgner et al., Proc. Natl. Acad. Sci. USA 84:7413-7417 (1987). One  $\mu$ g of BaculoGold™ virus DNA and 5  $\mu$ g  
20 of the plasmid are mixed in a sterile well of a microtiter plate containing 50  $\mu$ l of serum-free Grace's medium (Life Technologies Inc., Gaithersburg, MD). Afterwards, 10  $\mu$ l Lipofectin plus 90  $\mu$ l Grace's medium are added, mixed and incubated for 15 minutes at room temperature. Then the transfection mixture is added drop-wise to Sf9 insect cells (ATCC CRL 1711) seeded in a 35 mm tissue culture plate with 1 ml Grace's medium without serum.  
25 The plate is then incubated for 5 hours at 27° C. The transfection solution is then removed from the plate and 1 ml of Grace's insect medium supplemented with 10% fetal calf serum is added. Cultivation is then continued at 27° C for four days.

After four days the supernatant is collected and a plaque assay is performed, as described by Summers and Smith, *supra*. An agarose gel with "Blue Gal" (Life Technologies  
30 Inc., Gaithersburg) is used to allow easy identification and isolation of gal-expressing clones, which produce blue-stained plaques. (A detailed description of a "plaque assay" of this type can also be found in the user's guide for insect cell culture and baculovirology distributed by

Life Technologies Inc., Gaithersburg, page 9- 10.) After appropriate incubation, blue stained plaques are picked with the tip of a micropipettor (e.g., Eppendorf). The agar containing the recombinant viruses is then resuspended in a microcentrifuge tube containing 200  $\mu$ l of Grace's medium and the suspension containing the recombinant baculovirus is used to infect Sf9 cells seeded in 35 mm dishes. Four days later the supernatants of these culture dishes are harvested and then they are stored at 4° C.

To verify the expression of the polypeptide, Sf9 cells are grown in Grace's medium supplemented with 10% heat-inactivated FBS. The cells are infected with the recombinant baculovirus containing the polynucleotide at a multiplicity of infection ("MOI") of about 2. If radiolabeled proteins are desired, 6 hours later the medium is removed and is replaced with SF900 II medium minus methionine and cysteine (available from Life Technologies Inc., Rockville, MD). After 42 hours, 5  $\mu$ Ci of  $^{35}$ S-methionine and 5  $\mu$ Ci  $^{35}$ S-cysteine (available from Amersham) are added. The cells are further incubated for 16 hours and then are harvested by centrifugation. The proteins in the supernatant as well as the intracellular proteins are analyzed by SDS-PAGE followed by autoradiography (if radiolabeled).

Microsequencing of the amino acid sequence of the amino terminus of purified protein may be used to determine the amino terminal sequence of the produced protein.

### ***Example 8: Expression of a Polypeptide in Mammalian Cells***

20

The polypeptide of the present invention can be expressed in a mammalian cell. A typical mammalian expression vector contains a promoter element, which mediates the initiation of transcription of mRNA, a protein coding sequence, and signals required for the termination of transcription and polyadenylation of the transcript. Additional elements include enhancers, Kozak sequences and intervening sequences flanked by donor and acceptor sites for RNA splicing. Highly efficient transcription is achieved with the early and late promoters from SV40, the long terminal repeats (LTRs) from Retroviruses, e.g., RSV, HTLV1, HIV1 and the early promoter of the cytomegalovirus (CMV). However, cellular elements can also be used (e.g., the human actin promoter).

30

Suitable expression vectors for use in practicing the present invention include, for example, vectors such as pSVL and pMSG (Pharmacia, Uppsala, Sweden), pRSVcat (ATCC 37152), pSV2dhfr (ATCC 37146), pBC12MI (ATCC 67109), pCMVSPORT 2.0, and

pCMVSPORT 3.0. Mammalian host cells that could be used include, human Hela, 293, H9 and Jurkat cells, mouse NIH3T3 and C127 cells, Cos 1, Cos 7 and CV1, quail QC1-3 cells, mouse L cells and Chinese hamster ovary (CHO) cells.

Alternatively, the polypeptide can be expressed in stable cell lines containing the polynucleotide integrated into a chromosome. The co-transfection with a selectable marker such as DHFR, gpt, neomycin, hygromycin allows the identification and isolation of the transfected cells.

The transfected gene can also be amplified to express large amounts of the encoded protein. The DHFR (dihydrofolate reductase) marker is useful in developing cell lines that carry several hundred or even several thousand copies of the gene of interest. (See, e.g., Alt, F. W., et al., *J. Biol. Chem.* 253:1357-1370 (1978); Hamlin, J. L. and Ma, C., *Biochem. et Biophys. Acta*, 1097:107-143 (1990); Page, M. J. and Sydenham, M. A., *Biotechnology* 9:64-68 (1991).) Another useful selection marker is the enzyme glutamine synthase (GS) (Murphy et al., *Biochem. J.* 227:277-279 (1991); Bebbington et al., *Bio/Technology* 10:169-175 (1992). Using these markers, the mammalian cells are grown in selective medium and the cells with the highest resistance are selected. These cell lines contain the amplified gene(s) integrated into a chromosome. Chinese hamster ovary (CHO) and NSO cells are often used for the production of proteins.

Derivatives of the plasmid pSV2-dhfr (ATCC Accession No. 37146), the expression vectors pC4 (ATCC Accession No. 209646) and pC6 (ATCC Accession No. 209647) contain the strong promoter (LTR) of the Rous Sarcoma Virus (Cullen et al., *Molecular and Cellular Biology*, 438-447 (March, 1985)) plus a fragment of the CMV-enhancer (Boshart et al., *Cell* 41:521-530 (1985)). Multiple cloning sites, e.g., with the restriction enzyme cleavage sites BamHI, XbaI and Asp718, facilitate the cloning of the gene of interest. The vectors also contain the 3' intron, the polyadenylation and termination signal of the rat preproinsulin gene, and the mouse DHFR gene under control of the SV40 early promoter.

Specifically, the plasmid pC6, for example, is digested with appropriate restriction enzymes and then dephosphorylated using calf intestinal phosphates by procedures known in the art. The vector is then isolated from a 1% agarose gel.

A polynucleotide of the present invention is amplified according to the protocol outlined in Example 1. If a naturally occurring signal sequence is used to produce the colon or colon cancer related polypeptide, the vector does not need a second signal peptide.

Alternatively, if a naturally occurring signal sequence is not used, the vector can be modified to include a heterologous signal sequence. (See, e.g., WO 96/34891.)

The amplified fragment is isolated from a 1% agarose gel using a commercially available kit ("Geneclean," BIO 101 Inc., La Jolla, Ca.). The fragment then is digested with  
5 appropriate restriction enzymes and again purified on a 1% agarose gel.

The amplified fragment is then digested with the same restriction enzyme and purified on a 1% agarose gel. The isolated fragment and the dephosphorylated vector are then ligated with T4 DNA ligase. *E. coli* HB101 or XL-1 Blue cells are then transformed and bacteria are identified that contain the fragment inserted into plasmid pC6 using, for instance, restriction  
10 enzyme analysis.

Chinese hamster ovary cells lacking an active DHFR gene is used for transfection. Five µg of the expression plasmid pC6 or pC4 is cotransfected with 0.5 µg of the plasmid pSVneo using lipofectin (Felgner et al., *supra*). The plasmid pSV2-neo contains a dominant selectable marker, the *neo* gene from Tn5 encoding an enzyme that confers resistance to a  
15 group of antibiotics including G418. The cells are seeded in alpha minus MEM supplemented with 1 mg/ml G418. After 2 days, the cells are trypsinized and seeded in hybridoma cloning plates (Greiner, Germany) in alpha minus MEM supplemented with 10, 25, or 50 ng/ml of methotrexate plus 1 mg/ml G418. After about 10-14 days single clones are trypsinized and then seeded in 6-well petri dishes or 10 ml flasks using different  
20 concentrations of methotrexate (50 nM, 100 nM, 200 nM, 400 nM, 800 nM). Clones growing at the highest concentrations of methotrexate are then transferred to new 6-well plates containing even higher concentrations of methotrexate (1 µM, 2 µM, 5 µM, 10 mM, 20 mM). The same procedure is repeated until clones are obtained which grow at a concentration of 100 - 200 µM. Expression of the desired gene product is analyzed, for  
25 instance, by SDS-PAGE and Western blot or by reversed phase HPLC analysis.

### ***Example 9: Protein Fusions***

The polypeptides of the present invention are preferably fused to other proteins.  
30 These fusion proteins can be used for a variety of applications. For example, fusion of the present polypeptides to His-tag, HA-tag, protein A, IgG domains, and maltose binding protein facilitates purification. (See Example 5; see also EP A 394,827; Traunecker, et al.,



Nature 331:84-86 (1988).) Similarly, fusion to IgG-1, IgG-3, and albumin increases the half-life time in vivo. Nuclear localization signals fused to the polypeptides of the present invention can target the protein to a specific subcellular localization, while covalent heterodimer or homodimers can increase or decrease the activity of a fusion protein. Fusion proteins can also create chimeric molecules having more than one function. Finally, fusion proteins can increase solubility and/or stability of the fused protein compared to the non-fused protein. All of the types of fusion proteins described above can be made by modifying the following protocol, which outlines the fusion of a polypeptide to an IgG molecule, or the protocol described in Example 5.

Briefly, the human Fc portion of the IgG molecule can be PCR amplified, using primers that span the 5' and 3' ends of the sequence described below. These primers also should have convenient restriction enzyme sites that will facilitate cloning into an expression vector, preferably a mammalian expression vector.

For example, if pC4 (Accession No. 209646) is used, the human Fc portion can be ligated into the BamHI cloning site. Note that the 3' BamHI site should be destroyed. Next, the vector containing the human Fc portion is re-restricted with BamHI, linearizing the vector, and a polynucleotide of the present invention, isolated by the PCR protocol described in Example 1, is ligated into this BamHI site. Note that the polynucleotide is cloned without a stop codon, otherwise a fusion protein will not be produced.

If the naturally occurring signal sequence is used to produce the colon or colon cancer related polypeptide, pC4 does not need a second signal peptide. Alternatively, if the naturally occurring signal sequence is not used, the vector can be modified to include a heterologous signal sequence. (See, e.g., WO 96/34891.)

**Human IgG Fc region:**

```
GGGATCCGGAGCCCAAATCTTCTGACAAACTCACACATGCCACCGTGCCCAG
CACCTGAATTCGAGGGTGCACCGTCAGTCTTCTCTTCCCCCCAAAACCCAAGGA
CACCCTCATGATCTCCCGGACTCCTGAGGTACATGCGTGGTGGTGGACGTAAGC
CACGAAGACCCTGAGGTCAAGTTCAACTGGTACGTGGACGGCGTGGAGGTGCAT
AATGCCAAGACAAAGCCGCGGGAGGAGCAGTACAACAGCACGTACCGTGTGGTC
AGCGTCCTCACCGTCCTGCACCAGGACTGGCTGAATGGCAAGGAGTACAAGTGC
AAGGTCTCCAACAAAGCCCTCCCAACCCCCATCGAGAAAACCATCTCCAAAGCC
```

AAAGGGCAGCCCCGAGAACCACAGGTGTACACCCTGCCCCCATCCCGGGATGAG  
CTGACCAAGAACCAGGTCAGCCTGACCTGCCTGGTCAAAGGCTTCTATCCAAGC  
GACATCGCCGTGGAGTGGGAGAGCAATGGGCAGCCGGAGAACAACACTACAAGAC  
CACGCCTCCCGTGCTGGACTCCGACGGCTCCTTCTTCCTCTACAGCAAGCTCACC  
5 GTGGACAAGAGCAGGTGGCAGCAGGGGAACGTCTTCTCATGCTCCGTGATGCAT  
GAGGCTCTGCACAACCACTACACGCAGAAGAGCCTCTCCCTGTCTCCGGGTAAAT  
GAGTGCGACGGCCGCGACTCTAGAGGAT (SEQ ID NO:8555)

***Example 10: Production of an Antibody from a Polypeptide***

10

**a) Hybridoma Technology**

The antibodies of the present invention can be prepared by a variety of methods. (See, Current Protocols, Chapter 2.) As one example of such methods, cells expressing polypeptide of the present invention are administered to an animal to induce the production  
15 of sera containing polyclonal antibodies. In a preferred method, a preparation of polypeptide of the present invention is prepared and purified to render it substantially free of natural contaminants. Such a preparation is then introduced into an animal in order to produce polyclonal antisera of greater specific activity.

Monoclonal antibodies specific for polypeptide of the present invention are prepared  
20 using hybridoma technology. (Kohler et al., Nature 256:495 (1975); Kohler et al., Eur. J. Immunol. 6:511 (1976); Kohler et al., Eur. J. Immunol. 6:292 (1976); Hammerling et al., in: Monoclonal Antibodies and T-Cell Hybridomas, Elsevier, N.Y., pp. 563-681 (1981)). In general, an animal (preferably a mouse) is immunized with polypeptide of the present invention or, more preferably, with a secreted polypeptide of the present invention-  
25 expressing cell. Such polypeptide-expressing cells are cultured in any suitable tissue culture medium, preferably in Earle's modified Eagle's medium supplemented with 10% fetal bovine serum (inactivated at about 56°C), and supplemented with about 10 g/l of nonessential amino acids, about 1,000 U/ml of penicillin, and about 100 µg/ml of streptomycin.

The splenocytes of such mice are extracted and fused with a suitable myeloma cell  
30 line. Any suitable myeloma cell line may be employed in accordance with the present invention; however, it is preferable to employ the parent myeloma cell line (SP2O), available

from the ATCC. After fusion, the resulting hybridoma cells are selectively maintained in HAT medium, and then cloned by limiting dilution as described by Wands et al. (Gastroenterology 80:225-232 (1981)). The hybridoma cells obtained through such a selection are then assayed to identify clones which secrete antibodies capable of binding the polypeptide of the present invention.

Alternatively, additional antibodies capable of binding to polypeptide of the present invention can be produced in a two-step procedure using anti-idiotypic antibodies. Such a method makes use of the fact that antibodies are themselves antigens, and therefore, it is possible to obtain an antibody which binds to a second antibody. In accordance with this method, protein specific antibodies are used to immunize an animal, preferably a mouse. The splenocytes of such an animal are then used to produce hybridoma cells, and the hybridoma cells are screened to identify clones which produce an antibody whose ability to bind to the polypeptide of the present invention-specific antibody can be blocked by polypeptide of the present invention. Such antibodies comprise anti-idiotypic antibodies to the polypeptide of the present invention-specific antibody and are used to immunize an animal to induce formation of further polypeptide of the present invention-specific antibodies.

For in vivo use of antibodies in humans, an antibody is "humanized". Such antibodies can be produced using genetic constructs derived from hybridoma cells producing the monoclonal antibodies described above. Methods for producing chimeric and humanized antibodies are known in the art and are discussed herein. (See, for review, Morrison, Science 229:1202 (1985); Oi et al., BioTechniques 4:214 (1986); Cabilly et al., U.S. Patent No. 4,816,567; Taniguchi et al., EP 171496; Morrison et al., EP 173494; Neuberger et al., WO 8601533; Robinson et al., WO 8702671; Boulianne et al., Nature 312:643 (1984); Neuberger et al., Nature 314:268 (1985).)

#### **b) Isolation Of Antibody Fragments Directed Against Polypeptide of the Present Invention From A Library Of scFvs**

Naturally occurring V-genes isolated from human PBLs are constructed into a library of antibody fragments which contain reactivities against polypeptide of the present invention to which the donor may or may not have been exposed (see e.g., U.S. Patent 5,885,793 incorporated herein by reference in its entirety).

*Rescue of the Library.* A library of scFvs is constructed from the RNA of human

PBLs as described in PCT publication WO 92/01047. To rescue phage displaying antibody fragments, approximately 10<sup>9</sup> E. coli harboring the phagemid are used to inoculate 50 ml of 2xTY containing 1% glucose and 100 µg/ml of ampicillin (2xTY-AMP-GLU) and grown to an O.D. of 0.8 with shaking. Five ml of this culture is used to inoculate 50 ml of 2xTY-AMP-GLU, 2 x 10<sup>8</sup> TU of delta gene 3 helper (M13 delta gene III, see PCT publication WO 92/01047) are added and the culture incubated at 37°C for 45 minutes without shaking and then at 37°C for 45 minutes with shaking. The culture is centrifuged at 4000 r.p.m. for 10 min. and the pellet resuspended in 2 liters of 2xTY containing 100 µg/ml ampicillin and 50 µg/ml kanamycin and grown overnight. Phage are prepared as described in PCT publication WO 92/01047.

M13 delta gene III is prepared as follows: M13 delta gene III helper phage does not encode gene III protein, hence the phage(mid) displaying antibody fragments have a greater avidity of binding to antigen. Infectious M13 delta gene III particles are made by growing the helper phage in cells harboring a pUC19 derivative supplying the wild type gene III protein during phage morphogenesis. The culture is incubated for 1 hour at 37° C without shaking and then for a further hour at 37°C with shaking. Cells are spun down (IEC-Centra 8,400 r.p.m. for 10 min), resuspended in 300 ml 2xTY broth containing 100 µg ampicillin/ml and 25 µg kanamycin/ml (2xTY-AMP-KAN) and grown overnight, shaking at 37°C. Phage particles are purified and concentrated from the culture medium by two PEG-precipitations (Sambrook et al., 1990), resuspended in 2 ml PBS and passed through a 0.45 µm filter (Minisart NML; Sartorius) to give a final concentration of approximately 10<sup>13</sup> transducing units/ml (ampicillin-resistant clones).

*Panning of the Library.* Immunotubes (Nunc) are coated overnight in PBS with 4 ml of either 100 µg/ml or 10 µg/ml of a polypeptide of the present invention. Tubes are blocked with 2% Marvel-PBS for 2 hours at 37°C and then washed 3 times in PBS. Approximately 10<sup>13</sup> TU of phage is applied to the tube and incubated for 30 minutes at room temperature tumbling on an over and under turntable and then left to stand for another 1.5 hours. Tubes are washed 10 times with PBS 0.1% Tween-20 and 10 times with PBS. Phage are eluted by adding 1 ml of 100 mM triethylamine and rotating 15 minutes on an under and over turntable after which the solution is immediately neutralized with 0.5 ml of 1.0M Tris-HCl, pH 7.4. Phage are then used to infect 10 ml of mid-log E. coli TG1 by incubating eluted phage with bacteria for 30 minutes at 37°C. The E. coli are then plated on TYE plates containing 1%

glucose and 100 µg/ml ampicillin. The resulting bacterial library is then rescued with delta gene 3 helper phage as described above to prepare phage for a subsequent round of selection. This process is then repeated for a total of 4 rounds of affinity purification with tube-washing increased to 20 times with PBS, 0.1% Tween-20 and 20 times with PBS for rounds 3 and 4.

*Characterization of Binders.* Eluted phage from the 3rd and 4th rounds of selection are used to infect E. coli HB 2151 and soluble scFv is produced (Marks, et al., 1991) from single colonies for assay. ELISAs are performed with microtitre plates coated with either 10 pg/ml of the polypeptide of the present invention in 50 mM bicarbonate pH 9.6. Clones positive in ELISA are further characterized by PCR fingerprinting (see, e.g., PCT publication WO 92/01047) and then by sequencing. These ELISA positive clones may also be further characterized by techniques known in the art, such as, for example, epitope mapping, binding affinity, receptor signal transduction, ability to block or competitively inhibit antibody/antigen binding, and competitive agonistic or antagonistic activity.

***Example 11: Method of Determining Alterations in a Gene Corresponding to a Polynucleotide***

RNA isolated from entire families or individual patients presenting with a phenotype of interest (such as a disease) is isolated. cDNA is then generated from these RNA samples using protocols known in the art. (See, Sambrook.) The cDNA is then used as a template for PCR, employing primers surrounding regions of interest in SEQ ID NO:X. Suggested PCR conditions consist of 35 cycles at 95 degrees C for 30 seconds; 60-120 seconds at 52-58 degrees C; and 60-120 seconds at 70 degrees C, using buffer solutions described in Sidransky et al., Science 252:706 (1991).

PCR products are then sequenced using primers labeled at their 5' end with T4 polynucleotide kinase, employing SequiTherm Polymerase. (Epicentre Technologies). The intron-exon borders of selected exons is also determined and genomic PCR products analyzed to confirm the results. PCR products harboring suspected mutations is then cloned and sequenced to validate the results of the direct sequencing.

PCR products is cloned into T-tailed vectors as described in Holton et al., Nucleic Acids Research, 19:1156 (1991) and sequenced with T7 polymerase (United States

Biochemical). Affected individuals are identified by mutations not present in unaffected individuals.

Genomic rearrangements are also observed as a method of determining alterations in a gene corresponding to a polynucleotide. Genomic clones isolated according to Example 2 are nick-translated with digoxigenindeoxy-uridine 5'-triphosphate (Boehringer Mannheim), and FISH performed as described in Johnson et al., Methods Cell Biol. 35:73-99 (1991). Hybridization with the labeled probe is carried out using a vast excess of human cot-1 DNA for specific hybridization to the corresponding genomic locus.

Chromosomes are counterstained with 4,6-diamino-2-phenylidole and propidium iodide, producing a combination of C- and R-bands. Aligned images for precise mapping are obtained using a triple-band filter set (Chroma Technology, Brattleboro, VT) in combination with a cooled charge-coupled device camera (Photometrics, Tucson, AZ) and variable excitation wavelength filters. (Johnson et al., Genet. Anal. Tech. Appl., 8:75 (1991).) Image collection, analysis and chromosomal fractional length measurements are performed using the ISee Graphical Program System. (Inovision Corporation, Durham, NC.) Chromosome alterations of the genomic region hybridized by the probe are identified as insertions, deletions, and translocations. These alterations are used as a diagnostic marker for an associated disease.

### ***Example 12: Method of Detecting Abnormal Levels of a Polypeptide in a Biological Sample***

A polypeptide of the present invention can be detected in a biological sample, and if an increased or decreased level of the polypeptide is detected, this polypeptide is a marker for a particular phenotype. Methods of detection are numerous, and thus, it is understood that one skilled in the art can modify the following assay to fit their particular needs.

For example, antibody-sandwich ELISAs are used to detect polypeptides in a sample, preferably a biological sample. Wells of a microtiter plate are coated with specific antibodies, at a final concentration of 0.2 to 10 ug/ml. The antibodies are either monoclonal or polyclonal and are produced by the method described in Example 10. The wells are blocked so that non-specific binding of the polypeptide to the well is reduced.

The coated wells are then incubated for > 2 hours at RT with a sample containing the polypeptide. Preferably, serial dilutions of the sample should be used to validate results. The plates are then washed three times with deionized or distilled water to remove unbound polypeptide.

5       Next, 50 ul of specific antibody-alkaline phosphatase conjugate, at a concentration of 25-400 ng, is added and incubated for 2 hours at room temperature. The plates are again washed three times with deionized or distilled water to remove unbound conjugate.

10       Add 75 ul of 4-methylumbelliferyl phosphate (MUP) or p-nitrophenyl phosphate (NPP) substrate solution to each well and incubate 1 hour at room temperature. Measure the reaction by a microtiter plate reader. Prepare a standard curve, using serial dilutions of a control sample, and plot polypeptide concentration on the X-axis (log scale) and fluorescence or absorbance of the Y-axis (linear scale). Interpolate the concentration of the polypeptide in the sample using the standard curve.

15       **Example 13: Formulation**

The invention also provides methods of treatment and/or prevention of diseases or disorders (such as, for example, any one or more of the diseases or disorders disclosed herein) by administration to a subject of an effective amount of a Therapeutic. By  
20       therapeutic is meant a polynucleotides or polypeptides of the invention (including fragments and variants), agonists or antagonists thereof, and/or antibodies thereto; in combination with a pharmaceutically acceptable carrier type (e.g., a sterile carrier).

The Therapeutic will be formulated and dosed in a fashion consistent with good medical practice, taking into account the clinical condition of the individual patient (especially the  
25       side effects of treatment with the Therapeutic alone), the site of delivery, the method of administration, the scheduling of administration, and other factors known to practitioners. The "effective amount" for purposes herein is thus determined by such considerations.

As a general proposition, the total pharmaceutically effective amount of the  
30       Therapeutic administered parenterally per dose will be in the range of about 1 µg/kg/day to 10 mg/kg/day of patient body weight, although, as noted above, this will be subject to therapeutic discretion. More preferably, this dose is at least 0.01 mg/kg/day, and most preferably for humans between about 0.01 and 1 mg/kg/day for the hormone. If given

continuously, the Therapeutic is typically administered at a dose rate of about 1 ug/kg/hour to about 50 ug/kg/hour, either by 1-4 injections per day or by continuous subcutaneous infusions, for example, using a mini-pump. An intravenous bag solution may also be employed. The length of treatment needed to observe changes and the interval following treatment for responses to occur appears to vary depending on the desired effect.

Therapeutics can be administered orally, rectally, parenterally, intracisternally, intravaginally, intraperitoneally, topically (as by powders, ointments, gels, drops or transdermal patch), buccally, or as an oral or nasal spray. "Pharmaceutically acceptable carrier" refers to a non-toxic solid, semisolid or liquid filler, diluent, encapsulating material or formulation auxiliary of any. The term "parenteral" as used herein refers to modes of administration which include intravenous, intramuscular, intraperitoneal, intrasternal, subcutaneous and intraarticular injection and infusion.

Therapeutics of the invention are also suitably administered by sustained-release systems. Suitable examples of sustained-release Therapeutics are administered orally, rectally, parenterally, intracisternally, intravaginally, intraperitoneally, topically (as by powders, ointments, gels, drops or transdermal patch), buccally, or as an oral or nasal spray. "Pharmaceutically acceptable carrier" refers to a non-toxic solid, semisolid or liquid filler, diluent, encapsulating material or formulation auxiliary of any type. The term "parenteral" as used herein refers to modes of administration which include intravenous, intramuscular, intraperitoneal, intrasternal, subcutaneous and intraarticular injection and infusion.

Therapeutics of the invention are also suitably administered by sustained-release systems. Suitable examples of sustained-release Therapeutics include suitable polymeric materials (such as, for example, semi-permeable polymer matrices in the form of shaped articles, e.g., films, or microcapsules), suitable hydrophobic materials (for example as an emulsion in an acceptable oil) or ion exchange resins, and sparingly soluble derivatives (such as, for example, a sparingly soluble salt).

Sustained-release matrices include polylactides (U.S. Pat. No. 3,773,919, EP 58,481), copolymers of L-glutamic acid and gamma-ethyl-L-glutamate (Sidman et al., Biopolymers 22:547-556 (1983)), poly (2- hydroxyethyl methacrylate) (Langer et al., J. Biomed. Mater. Res. 15:167-277 (1981), and Langer, Chem. Tech. 12:98-105 (1982)), ethylene vinyl acetate (Langer et al., Id.) or poly-D- (-)-3-hydroxybutyric acid (EP 133,988).



Sustained-release Therapeutics also include liposomally entrapped Therapeutics of the invention (see generally, Langer, *Science* 249:1527-1533 (1990); Treat et al., in *Liposomes in the Therapy of Infectious Disease and Cancer*, Lopez-Berestein and Fidler (eds.), Liss, New York, pp. 317-327 and 353-365 (1989)). Liposomes containing the  
5 Therapeutic are prepared by methods known per se: DE 3,218,121; Epstein et al., Proc. Natl. Acad. Sci. (USA) 82:3688-3692 (1985); Hwang et al., Proc. Natl. Acad. Sci.(USA) 77:4030-4034 (1980); EP 52,322; EP 36,676; EP 88,046; EP 143,949; EP 142,641; Japanese Pat. Appl. 83-118008; U.S. Pat. Nos. 4,485,045 and 4,544,545; and EP 102,324. Ordinarily, the liposomes are of the small (about 200-800 Angstroms) unilamellar type in which the lipid  
10 content is greater than about 30 mol. percent cholesterol, the selected proportion being adjusted for the optimal Therapeutic.

In yet an additional embodiment, the Therapeutics of the invention are delivered by way of a pump (see Langer, *supra*; Sefton, CRC Crit. Ref. Biomed. Eng. 14:201 (1987); Buchwald et al., *Surgery* 88:507 (1980); Saudek et al., *N. Engl. J. Med.* 321:574 (1989)).  
15 Other controlled release systems are discussed in the review by Langer (*Science* 249:1527-1533 (1990)).

For parenteral administration, in one embodiment, the Therapeutic is formulated generally by mixing it at the desired degree of purity, in a unit dosage injectable form (solution, suspension, or emulsion), with a pharmaceutically acceptable carrier, i.e., one that  
20 is non-toxic to recipients at the dosages and concentrations employed and is compatible with other ingredients of the formulation. For example, the formulation preferably does not include oxidizing agents and other compounds that are known to be deleterious to the Therapeutic.

Generally, the formulations are prepared by contacting the Therapeutic uniformly and  
25 intimately with liquid carriers or finely divided solid carriers or both. Then, if necessary, the product is shaped into the desired formulation. Preferably the carrier is a parenteral carrier, more preferably a solution that is isotonic with the blood of the recipient. Examples of such carrier vehicles include water, saline, Ringer's solution, and dextrose solution. Non-aqueous vehicles such as fixed oils and ethyl oleate are also useful herein, as well as liposomes.

30 The carrier suitably contains minor amounts of additives such as substances that enhance isotonicity and chemical stability. Such materials are non-toxic to recipients at the dosages and concentrations employed, and include buffers such as phosphate, citrate,

succinate, acetic acid, and other organic acids or their salts; antioxidants such as ascorbic acid; low molecular weight (less than about ten residues) polypeptides, e.g., polyarginine or tripeptides; proteins, such as serum albumin, gelatin, or immunoglobulins; hydrophilic polymers such as polyvinylpyrrolidone; amino acids, such as glycine, glutamic acid, aspartic acid, or arginine; monosaccharides, disaccharides, and other carbohydrates including  
5 cellulose or its derivatives, glucose, manose, or dextrans; chelating agents such as EDTA; sugar alcohols such as mannitol or sorbitol; counterions such as sodium; and/or nonionic surfactants such as polysorbates, poloxamers, or PEG.

The Therapeutic is typically formulated in such vehicles at a concentration of about  
10 0.1 mg/ml to 100 mg/ml, preferably 1-10 mg/ml, at a pH of about 3 to 8. It will be understood that the use of certain of the foregoing excipients, carriers, or stabilizers will result in the formation of polypeptide salts.

Any pharmaceutical used for therapeutic administration can be sterile. Sterility is readily accomplished by filtration through sterile filtration membranes (e.g., 0.2 micron  
15 membranes). Therapeutics generally are placed into a container having a sterile access port, for example, an intravenous solution bag or vial having a stopper pierceable by a hypodermic injection needle.

Therapeutics ordinarily will be stored in unit or multi-dose containers, for example, sealed ampoules or vials, as an aqueous solution or as a lyophilized formulation for  
20 reconstitution. As an example of a lyophilized formulation, 10-ml vials are filled with 5 ml of sterile-filtered 1% (w/v) aqueous Therapeutic solution, and the resulting mixture is lyophilized. The infusion solution is prepared by reconstituting the lyophilized Therapeutic using bacteriostatic Water-for-Injection.

The invention also provides a pharmaceutical pack or kit comprising one or more  
25 containers filled with one or more of the ingredients of the Therapeutics of the invention. Associated with such container(s) can be a notice in the form prescribed by a governmental agency regulating the manufacture, use or sale of pharmaceuticals or biological products, which notice reflects approval by the agency of manufacture, use or sale for human administration. In addition, the Therapeutics may be employed in conjunction with other  
30 therapeutic compounds.

The Therapeutics of the invention may be administered alone or in combination with adjuvants. Adjuvants that may be administered with the Therapeutics of the invention

include, but are not limited to, alum, alum plus deoxycholate (ImmunoAg), MTP-PE (Biocine Corp.), QS21 (Genentech, Inc.), BCG, and MPL. In a specific embodiment, Therapeutics of the invention are administered in combination with alum. In another specific embodiment, Therapeutics of the invention are administered in combination with QS-21.

5 Further adjuvants that may be administered with the Therapeutics of the invention include, but are not limited to, Monophosphoryl lipid immunomodulator, AdjuVax 100a, QS-21, QS-18, CRL1005, Aluminum salts, MF-59, and Virosomal adjuvant technology. Vaccines that may be administered with the Therapeutics of the invention include, but are not limited to, vaccines directed toward protection against MMR (measles, mumps, rubella), polio, 10 varicella, tetanus/diphtheria, hepatitis A, hepatitis B, haemophilus influenzae B, whooping cough, pneumonia, influenza, Lyme's Disease, rotavirus, cholera, yellow fever, Japanese encephalitis, poliomyelitis, rabies, typhoid fever, and pertussis. Combinations may be administered either concomitantly, e.g., as an admixture, separately but simultaneously or concurrently; or sequentially. This includes presentations in which the combined agents are 15 administered together as a therapeutic mixture, and also procedures in which the combined agents are administered separately but simultaneously, e.g., as through separate intravenous lines into the same individual. Administration "in combination" further includes the separate administration of one of the compounds or agents given first, followed by the second.

The Therapeutics of the invention may be administered alone or in combination with 20 other therapeutic agents. Therapeutic agents that may be administered in combination with the Therapeutics of the invention, include but not limited to, other members of the TNF family, chemotherapeutic agents, antibiotics, steroidal and non-steroidal anti-inflammatories, conventional immunotherapeutic agents, cytokines and/or growth factors. Combinations may be administered either concomitantly, e.g., as an admixture, separately but simultaneously or 25 concurrently; or sequentially. This includes presentations in which the combined agents are administered together as a therapeutic mixture, and also procedures in which the combined agents are administered separately but simultaneously, e.g., as through separate intravenous lines into the same individual. Administration "in combination" further includes the separate administration of one of the compounds or agents given first, followed by the second.

30 In one embodiment, the Therapeutics of the invention are administered in combination with members of the TNF family. TNF, TNF-related or TNF-like molecules that may be administered with the Therapeutics of the invention include, but are not limited

to, soluble forms of TNF-alpha, lymphotoxin- alpha (LT-alpha, also known as TNF-beta), LT-beta (found in complex heterotrimer LT-alpha2-beta), OPGL, FasL, CD27L, CD30L, CD40L, 4-1BBL, DcR3, OX40L, TNF-gamma (International Publication No. WO 96/14328), AIM-I (International Publication No. WO 97/33899), endokine-alpha (International Publication No. WO 98/07880), TR6 (International Publication No. WO 98/30694), OPG, and neutrokin-alpha (International Publication No. WO 98/18921, OX40, and nerve growth factor (NGF), and soluble forms of Fas, CD30, CD27, CD40 and 4-1BB, TR2 (International Publication No. WO 96/34095), DR3 (International Publication No. WO 97/33904), DR4 (International Publication No. WO 98/32856), TR5 (International Publication No. WO 98/30693), TR6 (International Publication No. WO 98/30694), TR7 (International Publication No. WO 98/41629), TRANK, TR9 (International Publication No. WO 98/56892), TR10 (International Publication No. WO 98/54202), 312C2 (International Publication No. WO 98/06842), and TR12, and soluble forms CD154, CD70, and CD153.

In certain embodiments, Therapeutics of the invention are administered in combination with antiretroviral agents, nucleoside reverse transcriptase inhibitors, non-nucleoside reverse transcriptase inhibitors, and/or protease inhibitors. Nucleoside reverse transcriptase inhibitors that may be administered in combination with the Therapeutics of the invention, include, but are not limited to, RETROVIR™ (zidovudine/AZT), VIDEX™ (didanosine/ddI), HIVID™ (zalcitabine/ddC), ZERIT™ (stavudine/d4T), EPIVIR™ (lamivudine/3TC), and COMBIVIR™ (zidovudine/lamivudine). Non-nucleoside reverse transcriptase inhibitors that may be administered in combination with the Therapeutics of the invention, include, but are not limited to, VIRAMUNE™ (nevirapine), RESCRIPTOR™ (delavirdine), and SUSTIVA™ (efavirenz). Protease inhibitors that may be administered in combination with the Therapeutics of the invention, include, but are not limited to, CRIXIVAN™ (indinavir), NORVIR™ (ritonavir), INVIRASE™ (saquinavir), and VIRACEPT™ (nelfinavir). In a specific embodiment, antiretroviral agents, nucleoside reverse transcriptase inhibitors, non-nucleoside reverse transcriptase inhibitors, and/or protease inhibitors may be used in any combination with Therapeutics of the invention to treat AIDS and/or to prevent or treat HIV infection.

In other embodiments, Therapeutics of the invention may be administered in combination with anti-opportunistic infection agents. Anti-opportunistic agents that may be administered in combination with the Therapeutics of the invention, include, but are not

limited to, TRIMETHOPRIM-SULFAMETHOXAZOLE™, DAPSONE™, PENTAMIDINE™, ATOVAQUONE™, ISONIAZID™, RIFAMPIN™, PYRAZINAMIDE™, ETHAMBUTOL™, RIFABUTIN™, CLARITHROMYCIN™, AZITHROMYCIN™, GANCICLOVIR™, FOSCARNET™, CIDOFOVIR™, FLUCONAZOLE™, ITRACONAZOLE™, KETOCONAZOLE™, ACYCLOVIR™, FAMCICOLVIR™, PYRIMETHAMINE™, LEUCOVORIN™, NEUPOGEN™ (filgrastim/G-CSF), and LEUKINE™ (sargramostim/GM-CSF). In a specific embodiment, Therapeutics of the invention are used in any combination with TRIMETHOPRIM-SULFAMETHOXAZOLE™, DAPSONE™, PENTAMIDINE™, and/or ATOVAQUONE™ to prophylactically treat or prevent an opportunistic *Pneumocystis carinii* pneumonia infection. In another specific embodiment, Therapeutics of the invention are used in any combination with ISONIAZID™, RIFAMPIN™, PYRAZINAMIDE™, and/or ETHAMBUTOL™ to prophylactically treat or prevent an opportunistic *Mycobacterium avium* complex infection. In another specific embodiment, Therapeutics of the invention are used in any combination with RIFABUTIN™, CLARITHROMYCIN™, and/or AZITHROMYCIN™ to prophylactically treat or prevent an opportunistic *Mycobacterium tuberculosis* infection. In another specific embodiment, Therapeutics of the invention are used in any combination with GANCICLOVIR™, FOSCARNET™, and/or CIDOFOVIR™ to prophylactically treat or prevent an opportunistic cytomegalovirus infection. In another specific embodiment, Therapeutics of the invention are used in any combination with FLUCONAZOLE™, ITRACONAZOLE™, and/or KETOCONAZOLE™ to prophylactically treat or prevent an opportunistic fungal infection. In another specific embodiment, Therapeutics of the invention are used in any combination with ACYCLOVIR™ and/or FAMCICOLVIR™ to prophylactically treat or prevent an opportunistic herpes simplex virus type I and/or type II infection. In another specific embodiment, Therapeutics of the invention are used in any combination with PYRIMETHAMINE™ and/or LEUCOVORIN™ to prophylactically treat or prevent an opportunistic *Toxoplasma gondii* infection. In another specific embodiment, Therapeutics of the invention are used in any combination with LEUCOVORIN™ and/or NEUPOGEN™ to prophylactically treat or prevent an opportunistic bacterial infection. In a further embodiment, the Therapeutics of the invention are administered in combination with an antiviral agent. Antiviral agents that may be administered with the

Therapeutics of the invention include, but are not limited to, acyclovir, ribavirin, amantadine, and remantidine.

In a further embodiment, the Therapeutics of the invention are administered in combination with an antibiotic agent. Antibiotic agents that may be administered with the  
5 Therapeutics of the invention include, but are not limited to, amoxicillin, beta-lactamases, aminoglycosides, beta-lactam (glycopeptide), beta-lactamases, Clindamycin, chloramphenicol, cephalosporins, ciprofloxacin, ciprofloxacin, erythromycin, fluoroquinolones, macrolides, metronidazole, penicillins, quinolones, rifampin, streptomycin, sulfonamide, tetracyclines, trimethoprim, trimethoprim-sulfamthoxazole, and vancomycin.

10 Conventional nonspecific immunosuppressive agents, that may be administered in combination with the Therapeutics of the invention include, but are not limited to, steroids, cyclosporine, cyclosporine analogs, cyclophosphamide methylprednisone, prednisone, azathioprine, FK-506, 15-deoxyspergualin, and other immunosuppressive agents that act by suppressing the function of responding T cells.

15 In specific embodiments, Therapeutics of the invention are administered in combination with immunosuppressants. Immunosuppressants preparations that may be administered with the Therapeutics of the invention include, but are not limited to, ORTHOCLONE™ (OKT3), SANDIMMUNE™/NEORAL™/SANGDYA™ (cyclosporin), PROGRAF™ (tacrolimus), CELLCEPT™ (mycophenolate), Azathioprine, glucocorticosteroids,  
20 and RAPAMUNE™ (sirolimus). In a specific embodiment, immunosuppressants may be used to prevent rejection of organ or bone marrow transplantation.

In an additional embodiment, Therapeutics of the invention are administered alone or in combination with one or more intravenous immune globulin preparations. Intravenous immune globulin preparations that may be administered with the Therapeutics of the  
25 invention include, but not limited to, GAMMAR™, IVEEGAM™, SANDOGLOBULIN™, GAMMAGARD S/D™, and GAMIMUNE™. In a specific embodiment, Therapeutics of the invention are administered in combination with intravenous immune globulin preparations in transplantation therapy (e.g., bone marrow transplant).

In an additional embodiment, the Therapeutics of the invention are administered alone  
30 or in combination with an anti-inflammatory agent. Anti-inflammatory agents that may be administered with the Therapeutics of the invention include, but are not limited to, glucocorticoids and the nonsteroidal anti-inflammatories, aminoarylcarboxylic acid

derivatives, arylacetic acid derivatives, arylbutyric acid derivatives, arylcarboxylic acids, arylpropionic acid derivatives, pyrazoles, pyrazolones, salicylic acid derivatives, thiazinecarboxamides, e-acetamidocaproic acid, S-adenosylmethionine, 3-amino-4-hydroxybutyric acid, amixetrine, bendazac, benzydamine, bucolome, difenpiramide, ditazol, 5 emorfazone, guaiazulene, nabumetone, nimesulide, orgotein, oxaceprol, paranyline, perisoxal, pifoxime, proquazone, proxazole, and tenidap.

In another embodiment, compositions of the invention are administered in combination with a chemotherapeutic agent. Chemotherapeutic agents that may be administered with the Therapeutics of the invention include, but are not limited to, antibiotic 10 derivatives (e.g., doxorubicin, bleomycin, daunorubicin, and dactinomycin); antiestrogens (e.g., tamoxifen); antimetabolites (e.g., fluorouracil, 5-FU, methotrexate, floxuridine, interferon alpha-2b, glutamic acid, plicamycin, mercaptopurine, and 6-thioguanine); cytotoxic agents (e.g., carmustine, BCNU, lomustine, CCNU, cytosine arabinoside, cyclophosphamide, estramustine, hydroxyurea, procarbazine, mitomycin, busulfan, cis-platin, 15 and vincristine sulfate); hormones (e.g., medroxyprogesterone, estramustine phosphate sodium, ethinyl estradiol, estradiol, megestrol acetate, methyltestosterone, diethylstilbestrol diphosphate, chlorotrianisene, and testolactone); nitrogen mustard derivatives (e.g., mephalen, chlorambucil, mechlorethamine (nitrogen mustard) and thiotepe); steroids and combinations (e.g., bethamethasone sodium phosphate); and others (e.g., dicarbazine, 20 asparaginase, mitotane, vincristine sulfate, vinblastine sulfate, and etoposide).

In a specific embodiment, Therapeutics of the invention are administered in combination with CHOP (cyclophosphamide, doxorubicin, vincristine, and prednisone) or any combination of the components of CHOP. In another embodiment, Therapeutics of the invention are administered in combination with Rituximab. In a further embodiment, 25 Therapeutics of the invention are administered with Rituxmab and CHOP, or Rituxmab and any combination of the components of CHOP.

In an additional embodiment, the Therapeutics of the invention are administered in combination with cytokines. Cytokines that may be administered with the Therapeutics of the invention include, but are not limited to, IL2, IL3, IL4, IL5, IL6, IL7, IL10, IL12, IL13, 30 IL15, anti-CD40, CD40L, IFN-gamma and TNF-alpha. In another embodiment, Therapeutics of the invention may be administered with any interleukin, including, but not

limited to, IL-1alpha, IL-1beta, IL-2, IL-3, IL- 4, IL-5, IL-6, IL-7, IL-8, IL-9, IL-10, IL-11, IL-12, IL-13, IL-14, IL-15, IL-16, IL-17, IL-18, IL-19, IL-20, and IL-21.

In an additional embodiment, the Therapeutics of the invention are administered in combination with angiogenic proteins. Angiogenic proteins that may be administered with the Therapeutics of the invention include, but are not limited to, Glioma Derived Growth Factor (GDGF), as disclosed in European Patent Number EP-399816; Platelet Derived Growth Factor-A (PDGF-A), as disclosed in European Patent Number EP-682110; Platelet Derived Growth Factor-B (PDGF-B), as disclosed in European Patent Number EP-282317; Placental Growth Factor (PIGF), as disclosed in International Publication Number WO 92/06194; Placental Growth Factor-2 (PIGF-2), as disclosed in Hauser et al., Growth Factors, 4:259-268 (1993); Vascular Endothelial Growth Factor (VEGF), as disclosed in International Publication Number WO 90/13649; Vascular Endothelial Growth Factor-A (VEGF-A), as disclosed in European Patent Number EP-506477; Vascular Endothelial Growth Factor-2 (VEGF-2), as disclosed in International Publication Number WO 96/39515; Vascular Endothelial Growth Factor B (VEGF-3); Vascular Endothelial Growth Factor B-186 (VEGF-B186); as disclosed in International Publication Number WO 96/26736; Vascular Endothelial Growth Factor-D (VEGF-D), as disclosed in International Publication Number WO 98/02543; Vascular Endothelial Growth Factor-D (VEGF-D), as disclosed in International Publication Number WO 98/07832; and Vascular Endothelial Growth Factor-E (VEGF-E), as disclosed in German Patent Number DE19639601. The above mentioned references are incorporated herein by reference herein.

In an additional embodiment, the Therapeutics of the invention are administered in combination with hematopoietic growth factors. Hematopoietic growth factors that may be administered with the Therapeutics of the invention include, but are not limited to, LEUKINE™ (SARGRAMOSTIM™) and NEUPOGEN™ (FILGRASTIM™).

In an additional embodiment, the Therapeutics of the invention are administered in combination with Fibroblast Growth Factors. Fibroblast Growth Factors that may be administered with the Therapeutics of the invention include, but are not limited to, FGF-1, FGF-2, FGF-3, FGF-4, FGF-5, FGF-6, FGF-7, FGF-8, FGF-9, FGF-10, FGF-11, FGF-12, FGF-13, FGF-14, and FGF-15.



In additional embodiments, the Therapeutics of the invention are administered in combination with other therapeutic or prophylactic regimens, such as, for example, radiation therapy.

5       ***Example 14: Method of Treating Decreased Levels of the Polypeptide***

The present invention relates to a method for treating an individual in need of an increased level of a polypeptide of the invention in the body comprising administering to such an individual a composition comprising a therapeutically effective amount of an agonist of the invention (including polypeptides of the invention). Moreover, it will be appreciated that conditions caused by a decrease in the standard or normal expression level of a colon or colon cancer related polypeptide in an individual can be treated by administering the agonist or antagonist of the present invention. Thus, the invention also provides a method of treatment of an individual in need of an increased level of the polypeptide comprising  
10 administering to such an individual a Therapeutic comprising an amount of the agonist or antagonist to increase the activity level of the polypeptide in such an individual.

For example, a patient with decreased levels of a polypeptide receives a daily dose 0.1-100 ug/kg of the agonist or antagonist for six consecutive days. The exact details of the dosing scheme, based on administration and formulation, are provided in Example 13.

20       ***Example 15: Method of Treating Increased Levels of the Polypeptide***

The present invention also relates to a method of treating an individual in need of a decreased level of a polypeptide of the invention in the body comprising administering to  
25 such an individual a composition comprising a therapeutically effective amount of an antagonist of the invention (including polypeptides and antibodies of the invention).

In one example, antisense technology is used to inhibit production of a polypeptide of the present invention. This technology is one example of a method of decreasing levels of a polypeptide, due to a variety of etiologies, such as cancer.

30 For example, a patient diagnosed with abnormally increased levels of a polypeptide is administered intravenously antisense polynucleotides at 0.5, 1.0, 1.5, 2.0 and 3.0 mg/kg day

for 21 days. This treatment is repeated after a 7-day rest period if the treatment was well tolerated. The formulation of the antisense polynucleotide is provided in Example 13.

***Example 16: Method of Treatment Using Gene Therapy-Ex Vivo***

5

One method of gene therapy transplants fibroblasts, which are capable of expressing a polypeptide, onto a patient. Generally, fibroblasts are obtained from a subject by skin biopsy. The resulting tissue is placed in tissue-culture medium and separated into small pieces. Small chunks of the tissue are placed on a wet surface of a tissue culture flask, approximately  
10 ten pieces are placed in each flask. The flask is turned upside down, closed tight and left at room temperature over night. After 24 hours at room temperature, the flask is inverted and the chunks of tissue remain fixed to the bottom of the flask and fresh media (e.g., Ham's F12 media, with 10% FBS, penicillin and streptomycin) is added. The flasks are then incubated at 37 degree C for approximately one week.

15 At this time, fresh media is added and subsequently changed every several days. After an additional two weeks in culture, a monolayer of fibroblasts emerge. The monolayer is trypsinized and scaled into larger flasks.

pMV-7 (Kirschmeier, P.T. et al., DNA, 7:219-25 (1988)), flanked by the long terminal repeats of the Moloney murine sarcoma virus, is digested with EcoRI and HindIII  
20 and subsequently treated with calf intestinal phosphatase. The linear vector is fractionated on agarose gel and purified, using glass beads.

The cDNA encoding a polypeptide of the present invention can be amplified using PCR primers which correspond to the 5' and 3' end sequences respectively as set forth in Example 1 using primers and having appropriate restriction sites and initiation/stop codons, if  
25 necessary. Preferably, the 5' primer contains an EcoRI site and the 3' primer includes a HindIII site. Equal quantities of the Moloney murine sarcoma virus linear backbone and the amplified EcoRI and HindIII fragment are added together, in the presence of T4 DNA ligase. The resulting mixture is maintained under conditions appropriate for ligation of the two fragments. The ligation mixture is then used to transform bacteria HB101, which are then  
30 plated onto agar containing kanamycin for the purpose of confirming that the vector has the gene of interest properly inserted.

The amphotropic pA317 or GP+am12 packaging cells are grown in tissue culture to confluent density in Dulbecco's Modified Eagles Medium (DMEM) with 10% calf serum (CS), penicillin and streptomycin. The MSV vector containing the gene is then added to the media and the packaging cells transduced with the vector. The packaging cells now produce  
5 infectious viral particles containing the gene (the packaging cells are now referred to as producer cells).

Fresh media is added to the transduced producer cells, and subsequently, the media is harvested from a 10 cm plate of confluent producer cells. The spent media, containing the infectious viral particles, is filtered through a millipore filter to remove detached producer  
10 cells and this media is then used to infect fibroblast cells. Media is removed from a sub-confluent plate of fibroblasts and quickly replaced with the media from the producer cells. This media is removed and replaced with fresh media. If the titer of virus is high, then virtually all fibroblasts will be infected and no selection is required. If the titer is very low, then it is necessary to use a retroviral vector that has a selectable marker, such as neo or his.  
15 Once the fibroblasts have been efficiently infected, the fibroblasts are analyzed to determine whether protein is produced.

The engineered fibroblasts are then transplanted onto the host, either alone or after having been grown to confluence on cytodex 3 microcarrier beads.

### 20 ***Example 17: Gene Therapy Using Endogenous Genes Corresponding To Polynucleotides of the Invention***

Another method of gene therapy according to the present invention involves operably associating the endogenous polynucleotide sequence of the invention with a promoter via  
25 homologous recombination as described, for example, in U.S. Patent NO: 5,641,670, issued June 24, 1997; International Publication NO: WO 96/29411, published September 26, 1996; International Publication NO: WO 94/12650, published August 4, 1994; Koller et al., *Proc. Natl. Acad. Sci. USA*, 86:8932-8935 (1989); and Zijlstra et al., *Nature*, 342:435-438 (1989). This method involves the activation of a gene which is present in the target cells, but which is  
30 not expressed in the cells, or is expressed at a lower level than desired.

Polynucleotide constructs are made which contain a promoter and targeting sequences, which are homologous to the 5' non-coding sequence of endogenous

polynucleotide sequence, flanking the promoter. The targeting sequence will be sufficiently near the 5' end of the polynucleotide sequence so the promoter will be operably linked to the endogenous sequence upon homologous recombination. The promoter and the targeting sequences can be amplified using PCR. Preferably, the amplified promoter contains  
5 distinct restriction enzyme sites on the 5' and 3' ends. Preferably, the 3' end of the first targeting sequence contains the same restriction enzyme site as the 5' end of the amplified promoter and the 5' end of the second targeting sequence contains the same restriction site as the 3' end of the amplified promoter.

The amplified promoter and the amplified targeting sequences are digested with the  
10 appropriate restriction enzymes and subsequently treated with calf intestinal phosphatase. The digested promoter and digested targeting sequences are added together in the presence of T4 DNA ligase. The resulting mixture is maintained under conditions appropriate for ligation of the two fragments. The construct is size fractionated on an agarose gel then purified by phenol extraction and ethanol precipitation.

15 In this Example, the polynucleotide constructs are administered as naked polynucleotides via electroporation. However, the polynucleotide constructs may also be administered with transfection-facilitating agents, such as liposomes, viral sequences, viral particles, precipitating agents, etc. Such methods of delivery are known in the art.

Once the cells are transfected, homologous recombination will take place which  
20 results in the promoter being operably linked to the endogenous polynucleotide sequence. This results in the expression of polynucleotide corresponding to the polynucleotide in the cell. Expression may be detected by immunological staining, or any other method known in the art.

Fibroblasts are obtained from a subject by skin biopsy. The resulting tissue is placed  
25 in DMEM + 10% fetal calf serum. Exponentially growing or early stationary phase fibroblasts are trypsinized and rinsed from the plastic surface with nutrient medium. An aliquot of the cell suspension is removed for counting, and the remaining cells are subjected to centrifugation. The supernatant is aspirated and the pellet is resuspended in 5 ml of electroporation buffer (20 mM HEPES pH 7.3, 137 mM NaCl, 5 mM KCl, 0.7 mM Na<sub>2</sub>  
30 HPO<sub>4</sub>, 6 mM dextrose). The cells are recentrifuged, the supernatant aspirated, and the cells resuspended in electroporation buffer containing 1 mg/ml acetylated bovine serum albumin.

The final cell suspension contains approximately  $3 \times 10^6$  cells/ml. Electroporation should be performed immediately following resuspension.

Plasmid DNA is prepared according to standard techniques. For example, to construct a plasmid for targeting to the locus corresponding to the polynucleotide of the invention, plasmid pUC18 (MBI Fermentas, Amherst, NY) is digested with HindIII. The CMV promoter is amplified by PCR with an XbaI site on the 5' end and a BamHI site on the 3' end. Two non-coding sequences are amplified via PCR: one non-coding sequence (fragment 1) is amplified with a HindIII site at the 5' end and an Xba site at the 3' end; the other non-coding sequence (fragment 2) is amplified with a BamHI site at the 5' end and a HindIII site at the 3' end. The CMV promoter and the fragments (1 and 2) are digested with the appropriate enzymes (CMV promoter - XbaI and BamHI; fragment 1 - XbaI; fragment 2 - BamHI) and ligated together. The resulting ligation product is digested with HindIII, and ligated with the HindIII-digested pUC18 plasmid.

Plasmid DNA is added to a sterile cuvette with a 0.4 cm electrode gap (Bio-Rad). The final DNA concentration is generally at least  $120 \mu\text{g/ml}$ . 0.5 ml of the cell suspension (containing approximately  $1.5 \times 10^6$  cells) is then added to the cuvette, and the cell suspension and DNA solutions are gently mixed. Electroporation is performed with a Gene-Pulser apparatus (Bio-Rad). Capacitance and voltage are set at  $960 \mu\text{F}$  and 250-300 V, respectively. As voltage increases, cell survival decreases, but the percentage of surviving cells that stably incorporate the introduced DNA into their genome increases dramatically. Given these parameters, a pulse time of approximately 14-20 mSec should be observed.

Electroporated cells are maintained at room temperature for approximately 5 min, and the contents of the cuvette are then gently removed with a sterile transfer pipette. The cells are added directly to 10 ml of prewarmed nutrient media (DMEM with 15% calf serum) in a 10 cm dish and incubated at 37 degree C. The following day, the media is aspirated and replaced with 10 ml of fresh media and incubated for a further 16-24 hours.

The engineered fibroblasts are then injected into the host, either alone or after having been grown to confluence on cytodex 3 microcarrier beads. The fibroblasts now produce the protein product. The fibroblasts can then be introduced into a patient as described above.

### ***Example 18: Method of Treatment Using Gene Therapy - In Vivo***

Another aspect of the present invention is using *in vivo* gene therapy methods to treat disorders, diseases and conditions. The gene therapy method relates to the introduction of naked nucleic acid (DNA, RNA, and antisense DNA or RNA) sequences into an animal to increase or decrease the expression of the polypeptide. The polynucleotide of the present invention may be operatively linked to a promoter or any other genetic elements necessary for the expression of the polypeptide by the target tissue. Such gene therapy and delivery techniques and methods are known in the art, see, for example, WO90/11092, WO98/11779; U.S. Patent NO. 5693622, 5705151, 5580859; Tabata et al., Cardiovasc. Res. 35(3):470-479 (1997); Chao et al., Pharmacol. Res. 35(6):517-522 (1997); Wolff, Neuromuscul. Disord. 7(5):314-318 (1997); Schwartz et al., Gene Ther. 3(5):405-411 (1996); Tsurumi et al., Circulation 94(12):3281-3290 (1996) (incorporated herein by reference).

The polynucleotide constructs may be delivered by any method that delivers injectable materials to the cells of an animal, such as, injection into the interstitial space of tissues (heart, muscle, skin, lung, liver, intestine and the like). The polynucleotide constructs can be delivered in a pharmaceutically acceptable liquid or aqueous carrier.

The term "naked" polynucleotide, DNA or RNA, refers to sequences that are free from any delivery vehicle that acts to assist, promote, or facilitate entry into the cell, including viral sequences, viral particles, liposome formulations, lipofectin or precipitating agents and the like. However, the polynucleotides of the present invention may also be delivered in liposome formulations (such as those taught in Felgner P.L. et al. (1995) Ann. NY Acad. Sci. 772:126-139 and Abdallah B. et al. (1995) Biol. Cell 85(1):1-7) which can be prepared by methods well known to those skilled in the art.

The polynucleotide vector constructs used in the gene therapy method are preferably constructs that will not integrate into the host genome nor will they contain sequences that allow for replication. Any strong promoter known to those skilled in the art can be used for driving the expression of DNA. Unlike other gene therapies techniques, one major advantage of introducing naked nucleic acid sequences into target cells is the transitory nature of the polynucleotide synthesis in the cells. Studies have shown that non-replicating DNA sequences can be introduced into cells to provide production of the desired polypeptide for periods of up to six months.

The polynucleotide construct can be delivered to the interstitial space of tissues within the an animal, including of muscle, skin, brain, lung, liver, spleen, bone marrow, thymus,

heart, lymph, blood, bone, cartilage, pancreas, kidney, gall bladder, stomach, intestine, testis, ovary, uterus, rectum, nervous system, eye, gland, and connective tissue. Interstitial space of the tissues comprises the intercellular fluid, mucopolysaccharide matrix among the reticular fibers of organ tissues, elastic fibers in the walls of vessels or chambers, collagen fibers of fibrous tissues; or that same matrix within connective tissue ensheathing muscle cells or in the lacunae of bone. It is similarly the space occupied by the plasma of the circulation and the lymph fluid of the lymphatic channels. Delivery to the interstitial space of muscle tissue is preferred for the reasons discussed below. They may be conveniently delivered by injection into the tissues comprising these cells. They are preferably delivered to and expressed in persistent, non-dividing cells which are differentiated, although delivery and expression may be achieved in non-differentiated or less completely differentiated cells, such as, for example, stem cells of blood or skin fibroblasts. *In vivo* muscle cells are particularly competent in their ability to take up and express polynucleotides.

For the naked polynucleotide injection, an effective dosage amount of DNA or RNA will be in the range of from about 0.05 g/kg body weight to about 50 mg/kg body weight. Preferably the dosage will be from about 0.005 mg/kg to about 20 mg/kg and more preferably from about 0.05 mg/kg to about 5 mg/kg. Of course, as the artisan of ordinary skill will appreciate, this dosage will vary according to the tissue site of injection. The appropriate and effective dosage of nucleic acid sequence can readily be determined by those of ordinary skill in the art and may depend on the condition being treated and the route of administration. The preferred route of administration is by the parenteral route of injection into the interstitial space of tissues. However, other parenteral routes may also be used, such as, inhalation of an aerosol formulation particularly for delivery to lungs or bronchial tissues, throat or mucous membranes of the nose. In addition, naked polynucleotide constructs can be delivered to arteries during angioplasty by the catheter used in the procedure.

The dose response effects of injected polynucleotide in muscle *in vivo* is determined as follows. Suitable template DNA for production of mRNA coding for polypeptide of the present invention is prepared in accordance with a standard recombinant DNA methodology. The template DNA, which may be either circular or linear, is either used as naked DNA or complexed with liposomes. The quadriceps muscles of mice are then injected with various amounts of the template DNA.

Five to six week old female and male Balb/C mice are anesthetized by intraperitoneal

injection with 0.3 ml of 2.5% Avertin. A 1.5 cm incision is made on the anterior thigh, and the quadriceps muscle is directly visualized. The template DNA is injected in 0.1 ml of carrier in a 1 cc syringe through a 27 gauge needle over one minute, approximately 0.5 cm from the distal insertion site of the muscle into the knee and about 0.2 cm deep. A suture is placed over the injection site for future localization, and the skin is closed with stainless steel clips.

After an appropriate incubation time (e.g., 7 days) muscle extracts are prepared by excising the entire quadriceps. Every fifth 15 um cross-section of the individual quadriceps muscles is histochemically stained for protein expression. A time course for protein expression may be done in a similar fashion except that quadriceps from different mice are harvested at different times. Persistence of DNA in muscle following injection may be determined by Southern blot analysis after preparing total cellular DNA and HIRT supernatants from injected and control mice. The results of the above experimentation in mice can be use to extrapolate proper dosages and other treatment parameters in humans and other animals using naked DNA.

### ***Example 19: Transgenic Animals***

The polypeptides of the invention can also be expressed in transgenic animals. Animals of any species, including, but not limited to, mice, rats, rabbits, hamsters, guinea pigs, pigs, micro-pigs, goats, sheep, cows and non-human primates, e.g., baboons, monkeys, and chimpanzees may be used to generate transgenic animals. In a specific embodiment, techniques described herein or otherwise known in the art, are used to express polypeptides of the invention in humans, as part of a gene therapy protocol.

Any technique known in the art may be used to introduce the transgene (i.e., polynucleotides of the invention) into animals to produce the founder lines of transgenic animals. Such techniques include, but are not limited to, pronuclear microinjection (Paterson et al., Appl. Microbiol. Biotechnol. 40:691-698 (1994); Carver et al., Biotechnology (NY) 11:1263-1270 (1993); Wright et al., Biotechnology (NY) 9:830-834 (1991); and Hoppe et al., U.S. Pat. No. 4,873,191 (1989)); retrovirus mediated gene transfer into germ lines (Van der Putten et al., Proc. Natl. Acad. Sci., USA 82:6148-6152 (1985)), blastocysts or embryos; gene targeting in embryonic stem cells (Thompson et al., Cell 56:313-321 (1989));



electroporation of cells or embryos (Lo, 1983, Mol Cell Biol. 3:1803-1814 (1983)); introduction of the polynucleotides of the invention using a gene gun (see, e.g., Ulmer et al., Science 259:1745 (1993); introducing nucleic acid constructs into embryonic pluripotent stem cells and transferring the stem cells back into the blastocyst; and sperm-mediated gene transfer (Lavitrano et al., Cell 57:717-723 (1989); etc. For a review of such techniques, see Gordon, "Transgenic Animals," Intl. Rev. Cytol. 115:171-229 (1989), which is incorporated by reference herein in its entirety.

Any technique known in the art may be used to produce transgenic clones containing polynucleotides of the invention, for example, nuclear transfer into enucleated oocytes of nuclei from cultured embryonic, fetal, or adult cells induced to quiescence (Campbell et al., Nature 380:64-66 (1996); Wilmut et al., Nature 385:810-813 (1997)).

The present invention provides for transgenic animals that carry the transgene in all their cells, as well as animals which carry the transgene in some, but not all their cells, *i.e.*, mosaic animals or chimeric. The transgene may be integrated as a single transgene or as multiple copies such as in concatamers, *e.g.*, head-to-head tandems or head-to-tail tandems. The transgene may also be selectively introduced into and activated in a particular cell type by following, for example, the teaching of Lasko et al. (Lasko et al., Proc. Natl. Acad. Sci. USA 89:6232-6236 (1992)). The regulatory sequences required for such a cell-type specific activation will depend upon the particular cell type of interest, and will be apparent to those of skill in the art. When it is desired that the polynucleotide transgene be integrated into the chromosomal site of the endogenous gene, gene targeting is preferred. Briefly, when such a technique is to be utilized, vectors containing some nucleotide sequences homologous to the endogenous gene are designed for the purpose of integrating, via homologous recombination with chromosomal sequences, into and disrupting the function of the nucleotide sequence of the endogenous gene. The transgene may also be selectively introduced into a particular cell type, thus inactivating the endogenous gene in only that cell type, by following, for example, the teaching of Gu et al. (Gu et al., Science 265:103-106 (1994)). The regulatory sequences required for such a cell-type specific inactivation will depend upon the particular cell type of interest, and will be apparent to those of skill in the art.

Once transgenic animals have been generated, the expression of the recombinant gene may be assayed utilizing standard techniques. Initial screening may be accomplished by Southern blot analysis or PCR techniques to analyze animal tissues to verify that integration

of the transgene has taken place. The level of mRNA expression of the transgene in the tissues of the transgenic animals may also be assessed using techniques which include, but are not limited to, Northern blot analysis of tissue samples obtained from the animal, *in situ* hybridization analysis, and reverse transcriptase-PCR (rt-PCR). Samples of transgenic gene-expressing tissue may also be evaluated immunocytochemically or immunohistochemically using antibodies specific for the transgene product.

Once the founder animals are produced, they may be bred, inbred, outbred, or crossbred to produce colonies of the particular animal. Examples of such breeding strategies include, but are not limited to: outbreeding of founder animals with more than one integration site in order to establish separate lines; inbreeding of separate lines in order to produce compound transgenics that express the transgene at higher levels because of the effects of additive expression of each transgene; crossing of heterozygous transgenic animals to produce animals homozygous for a given integration site in order to both augment expression and eliminate the need for screening of animals by DNA analysis; crossing of separate homozygous lines to produce compound heterozygous or homozygous lines; and breeding to place the transgene on a distinct background that is appropriate for an experimental model of interest.

Transgenic animals of the invention have uses which include, but are not limited to, animal model systems useful in elaborating the biological function of polypeptides of the present invention, studying conditions and/or disorders associated with aberrant expression, and in screening for compounds effective in ameliorating such conditions and/or disorders.

### ***Example 20: Knock-Out Animals***

Endogenous gene expression can also be reduced by inactivating or "knocking out" the gene and/or its promoter using targeted homologous recombination. (*E.g.*, see Smithies et al., *Nature* 317:230-234 (1985); Thomas & Capecchi, *Cell* 51:503-512 (1987); Thompson et al., *Cell* 5:313-321 (1989); each of which is incorporated by reference herein in its entirety). For example, a mutant, non-functional polynucleotide of the invention (or a completely unrelated DNA sequence) flanked by DNA homologous to the endogenous polynucleotide sequence (either the coding regions or regulatory regions of the gene) can be used, with or without a selectable marker and/or a negative selectable marker, to transfect

cells that express polypeptides of the invention *in vivo*. In another embodiment, techniques known in the art are used to generate knockouts in cells that contain, but do not express the gene of interest. Insertion of the DNA construct, via targeted homologous recombination, results in inactivation of the targeted gene. Such approaches are particularly  
5 suited in research and agricultural fields where modifications to embryonic stem cells can be used to generate animal offspring with an inactive targeted gene (*e.g.*, see Thomas & Capecchi 1987 and Thompson 1989, *supra*). However this approach can be routinely adapted for use in humans provided the recombinant DNA constructs are directly administered or targeted to the required site *in vivo* using appropriate viral vectors that will  
10 be apparent to those of skill in the art.

In further embodiments of the invention, cells that are genetically engineered to express the polypeptides of the invention, or alternatively, that are genetically engineered not to express the polypeptides of the invention (*e.g.*, knockouts) are administered to a patient *in vivo*. Such cells may be obtained from the patient (*i.e.*, animal, including human) or an MHC  
15 compatible donor and can include, but are not limited to fibroblasts, bone marrow cells, blood cells (*e.g.*, lymphocytes), adipocytes, muscle cells, endothelial cells etc. The cells are genetically engineered *in vitro* using recombinant DNA techniques to introduce the coding sequence of polypeptides of the invention into the cells, or alternatively, to disrupt the coding sequence and/or endogenous regulatory sequence associated with the polypeptides of the  
20 invention, *e.g.*, by transduction (using viral vectors, and preferably vectors that integrate the transgene into the cell genome) or transfection procedures, including, but not limited to, the use of plasmids, cosmids, YACs, naked DNA, electroporation, liposomes, etc. The coding sequence of the polypeptides of the invention can be placed under the control of a strong constitutive or inducible promoter or promoter/enhancer to achieve expression, and  
25 preferably secretion, of the polypeptides of the invention. The engineered cells which express and preferably secrete the polypeptides of the invention can be introduced into the patient systemically, *e.g.*, in the circulation, or intraperitoneally.

Alternatively, the cells can be incorporated into a matrix and implanted in the body, *e.g.*, genetically engineered fibroblasts can be implanted as part of a skin graft; genetically  
30 engineered endothelial cells can be implanted as part of a lymphatic or vascular graft. (See, for example, Anderson et al. U.S. Patent No. 5,399,349; and Mulligan & Wilson, U.S. Patent No. 5,460,959 each of which is incorporated by reference herein in its entirety).

When the cells to be administered are non-autologous or non-MHC compatible cells, they can be administered using well known techniques which prevent the development of a host immune response against the introduced cells. For example, the cells may be introduced in an encapsulated form which, while allowing for an exchange of components with the immediate extracellular environment, does not allow the introduced cells to be recognized by the host immune system.

Transgenic and "knock-out" animals of the invention have uses which include, but are not limited to, animal model systems useful in elaborating the biological function of polypeptides of the present invention, studying conditions and/or disorders associated with aberrant expression, and in screening for compounds effective in ameliorating such conditions and/or disorders.

***Example 21: Assays Detecting Stimulation or Inhibition of B cell  
Proliferation and Differentiation***

15

Generation of functional humoral immune responses requires both soluble and cognate signaling between B-lineage cells and their microenvironment. Signals may impart a positive stimulus that allows a B-lineage cell to continue its programmed development, or a negative stimulus that instructs the cell to arrest its current developmental pathway. To date, numerous stimulatory and inhibitory signals have been found to influence B cell responsiveness including IL-2, IL-4, IL-5, IL-6, IL-7, IL10, IL-13, IL-14 and IL-15. Interestingly, these signals are by themselves weak effectors but can, in combination with various co-stimulatory proteins, induce activation, proliferation, differentiation, homing, tolerance and death among B cell populations.

25

One of the best studied classes of B-cell co-stimulatory proteins is the TNF-superfamily. Within this family CD40, CD27, and CD30 along with their respective ligands CD154, CD70, and CD153 have been found to regulate a variety of immune responses. Assays which allow for the detection and/or observation of the proliferation and differentiation of these B-cell populations and their precursors are valuable tools in determining the effects various proteins may have on these B-cell populations in terms of proliferation and differentiation. Listed below are two assays designed to allow for the

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detection of the differentiation, proliferation, or inhibition of B-cell populations and their precursors.

**In Vitro Assay-** Agonists or antagonists of the invention can be assessed for its ability to induce activation, proliferation, differentiation or inhibition and/or death in B-cell populations and their precursors. The activity of the agonists or antagonists of the invention on purified human tonsillar B cells, measured qualitatively over the dose range from 0.1 to 10,000 ng/mL, is assessed in a standard B-lymphocyte co-stimulation assay in which purified tonsillar B cells are cultured in the presence of either formalin-fixed *Staphylococcus aureus* Cowan I (SAC) or immobilized anti-human IgM antibody as the priming agent. Second signals such as IL-2 and IL-15 synergize with SAC and IgM crosslinking to elicit B cell proliferation as measured by tritiated-thymidine incorporation. Novel synergizing agents can be readily identified using this assay. The assay involves isolating human tonsillar B cells by magnetic bead (MACS) depletion of CD3-positive cells. The resulting cell population is greater than 95% B cells as assessed by expression of CD45R(B220).

Various dilutions of each sample are placed into individual wells of a 96-well plate to which are added  $10^5$  B-cells suspended in culture medium (RPMI 1640 containing 10% FBS,  $5 \times 10^{-5}$  M 2ME, 100U/ml penicillin, 10ug/ml streptomycin, and  $10^{-5}$  dilution of SAC) in a total volume of 150ul. Proliferation or inhibition is quantitated by a 20h pulse (1uCi/well) with  $^3$ H-thymidine (6.7 Ci/mM) beginning 72h post factor addition. The positive and negative controls are IL2 and medium respectively.

**In Vivo Assay-** BALB/c mice are injected (i.p.) twice per day with buffer only, or 2 mg/Kg of agonists or antagonists of the invention, or truncated forms thereof. Mice receive this treatment for 4 consecutive days, at which time they are sacrificed and various tissues and serum collected for analyses. Comparison of H&E sections from normal spleens and spleens treated with agonists or antagonists of the invention identify the results of the activity of the agonists or antagonists on spleen cells, such as the diffusion of peri-arterial lymphatic sheaths, and/or significant increases in the nucleated cellularity of the red pulp regions, which may indicate the activation of the differentiation and proliferation of B-cell populations. Immunohistochemical studies using a B cell marker, anti-CD45R(B220), are used to determine whether any physiological changes to splenic cells, such as splenic disorganization, are due to increased B-cell representation within loosely defined B-cell zones that infiltrate established T-cell regions.

Flow cytometric analyses of the spleens from mice treated with agonist or antagonist is used to indicate whether the agonists or antagonists specifically increases the proportion of ThB+, CD45R(B220)dull B cells over that which is observed in control mice.

Likewise, a predicted consequence of increased mature B-cell representation in vivo is a relative increase in serum Ig titers. Accordingly, serum IgM and IgA levels are compared between buffer and agonists or antagonists-treated mice.

The studies described in this example tested activity of agonists or antagonists of the invention. However, one skilled in the art could easily modify the exemplified studies to test the activity of polynucleotides or polypeptides of the invention (e.g., gene therapy).

### ***Example 22: T Cell Proliferation Assay***

A CD3-induced proliferation assay is performed on PBMCs and is measured by the uptake of <sup>3</sup>H-thymidine. The assay is performed as follows. Ninety-six well plates are coated with 100 µl/well of mAb to CD3 (HIT3a, Pharmingen) or isotype-matched control mAb (B33.1) overnight at 4 degrees C (1 µg/ml in .05M bicarbonate buffer, pH 9.5), then washed three times with PBS. PBMC are isolated by F/H gradient centrifugation from human peripheral blood and added to quadruplicate wells (5 x 10<sup>4</sup>/well) of mAb coated plates in RPMI containing 10% FCS and P/S in the presence of varying concentrations of agonists or antagonists of the invention (total volume 200 µl). Relevant protein buffer and medium alone are controls. After 48 hr. culture at 37 degrees C, plates are spun for 2 min. at 1000 rpm and 100 µl of supernatant is removed and stored -20 degrees C for measurement of IL-2 (or other cytokines) if effect on proliferation is observed. Wells are supplemented with 100 µl of medium containing 0.5 uCi of <sup>3</sup>H-thymidine and cultured at 37 degrees C for 18-24 hr. Wells are harvested and incorporation of <sup>3</sup>H-thymidine used as a measure of proliferation. Anti-CD3 alone is the positive control for proliferation. IL-2 (100 U/ml) is also used as a control which enhances proliferation. Control antibody which does not induce proliferation of T cells is used as the negative controls for the effects of agonists or antagonists of the invention.

The studies described in this example tested activity of agonists or antagonists of the invention. However, one skilled in the art could easily modify the exemplified studies to test the activity of polynucleotides or polypeptides of the invention (e.g., gene therapy).

***Example 23: Effect of Agonists or Antagonists of the Invention on the Expression of MHC Class II, Costimulatory and Adhesion Molecules and Cell Differentiation of Monocytes and Monocyte-Derived Human Dendritic Cells***

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Dendritic cells are generated by the expansion of proliferating precursors found in the peripheral blood: adherent PBMC or elutriated monocytic fractions are cultured for 7-10 days with GM-CSF (50 ng/ml) and IL-4 (20 ng/ml). These dendritic cells have the characteristic phenotype of immature cells (expression of CD1, CD80, CD86, CD40 and MHC class II antigens). Treatment with activating factors, such as TNF- $\alpha$ , causes a rapid change in surface phenotype (increased expression of MHC class I and II, costimulatory and adhesion molecules, downregulation of FC $\gamma$ RII, upregulation of CD83). These changes correlate with increased antigen-presenting capacity and with functional maturation of the dendritic cells.

15 FACS analysis of surface antigens is performed as follows. Cells are treated 1-3 days with increasing concentrations of agonist or antagonist of the invention or LPS (positive control), washed with PBS containing 1% BSA and 0.02 mM sodium azide, and then incubated with 1:20 dilution of appropriate FITC- or PE-labeled monoclonal antibodies for 30 minutes at 4 degrees C. After an additional wash, the labeled cells are analyzed by flow cytometry on a FACScan (Becton Dickinson).

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Effect on the production of cytokines. Cytokines generated by dendritic cells, in particular IL-12, are important in the initiation of T-cell dependent immune responses. IL-12 strongly influences the development of Th1 helper T-cell immune response, and induces cytotoxic T and NK cell function. An ELISA is used to measure the IL-12 release as follows. Dendritic cells ( $10^6$ /ml) are treated with increasing concentrations of agonists or antagonists of the invention for 24 hours. LPS (100 ng/ml) is added to the cell culture as positive control. Supernatants from the cell cultures are then collected and analyzed for IL-12 content using commercial ELISA kit (e.g., R & D Systems (Minneapolis, MN)). The standard protocols provided with the kits are used.

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Effect on the expression of MHC Class II, costimulatory and adhesion molecules. Three major families of cell surface antigens can be identified on monocytes: adhesion molecules, molecules involved in antigen presentation, and Fc receptor. Modulation of the expression of MHC class II antigens and other costimulatory molecules, such as B7 and ICAM-1, may result in changes in the antigen presenting capacity of monocytes and ability to induce T cell activation. Increase expression of Fc receptors may correlate with improved monocyte cytotoxic activity, cytokine release and phagocytosis.

FACS analysis is used to examine the surface antigens as follows. Monocytes are treated 1-5 days with increasing concentrations of agonists or antagonists of the invention or LPS (positive control), washed with PBS containing 1% BSA and 0.02 mM sodium azide, and then incubated with 1:20 dilution of appropriate FITC- or PE-labeled monoclonal antibodies for 30 minutes at 4 degreesC. After an additional wash, the labeled cells are analyzed by flow cytometry on a FACScan (Becton Dickinson).

Monocyte activation and/or increased survival. Assays for molecules that activate (or alternatively, inactivate) monocytes and/or increase monocyte survival (or alternatively, decrease monocyte survival) are known in the art and may routinely be applied to determine whether a molecule of the invention functions as an inhibitor or activator of monocytes. Agonists or antagonists of the invention can be screened using the three assays described below. For each of these assays, Peripheral blood mononuclear cells (PBMC) are purified from single donor leukopacks (American Red Cross, Baltimore, MD) by centrifugation through a Histopaque gradient (Sigma). Monocytes are isolated from PBMC by counterflow centrifugal elutriation.

Monocyte Survival Assay. Human peripheral blood monocytes progressively lose viability when cultured in absence of serum or other stimuli. Their death results from internally regulated process (apoptosis). Addition to the culture of activating factors, such as TNF-alpha dramatically improves cell survival and prevents DNA fragmentation. Propidium iodide (PI) staining is used to measure apoptosis as follows. Monocytes are cultured for 48 hours in polypropylene tubes in serum-free medium (positive control), in the presence of 100 ng/ml TNF-alpha (negative control), and in the presence of varying concentrations of the compound to be tested. Cells are suspended at a concentration of  $2 \times 10^6$ /ml in PBS containing PI at a



final concentration of 5 µg/ml, and then incubated at room temperature for 5 minutes before FACScan analysis. PI uptake has been demonstrated to correlate with DNA fragmentation in this experimental paradigm.

- 5 Effect on cytokine release. An important function of monocytes/macrophages is their regulatory activity on other cellular populations of the immune system through the release of cytokines after stimulation. An ELISA to measure cytokine release is performed as follows. Human monocytes are incubated at a density of  $5 \times 10^5$  cells/ml with increasing concentrations of agonists or antagonists of the invention and under the same conditions, but  
10 in the absence of agonists or antagonists. For IL-12 production, the cells are primed overnight with IFN (100 U/ml) in presence of agonist or antagonist of the invention. LPS (10 ng/ml) is then added. Conditioned media are collected after 24h and kept frozen until use. Measurement of TNF-alpha, IL-10, MCP-1 and IL-8 is then performed using a commercially available ELISA kit (e. g, R & D Systems (Minneapolis, MN)) and applying the standard  
15 protocols provided with the kit.

- Oxidative burst. Purified monocytes are plated in 96-w plate at  $2 \times 10^5$  cell/well. Increasing concentrations of agonists or antagonists of the invention are added to the wells in a total volume of 0.2 ml culture medium (RPMI 1640 + 10% FCS, glutamine and antibiotics). After  
20 3 days incubation, the plates are centrifuged and the medium is removed from the wells. To the macrophage monolayers, 0.2 ml per well of phenol red solution (140 mM NaCl, 10 mM potassium phosphate buffer pH 7.0, 5.5 mM dextrose, 0.56 mM phenol red and 19 U/ml of HRPO) is added, together with the stimulant (200 nM PMA). The plates are incubated at 37°C for 2 hours and the reaction is stopped by adding 20 µl 1N NaOH per well. The  
25 absorbance is read at 610 nm. To calculate the amount of H<sub>2</sub>O<sub>2</sub> produced by the macrophages, a standard curve of a H<sub>2</sub>O<sub>2</sub> solution of known molarity is performed for each experiment.

- The studies described in this example tested activity of agonists or antagonists of the invention. However, one skilled in the art could easily modify the exemplified studies to test  
30 the activity of polynucleotides or polypeptides of the invention (e.g., gene therapy).

***Example 24: Biological Effects of Agonists or Antagonists of the Invention***

Astrocyte and Neuronal Assays.

5 Agonists or antagonists of the invention, expressed in *Escherichia coli* and purified as described above, can be tested for activity in promoting the survival, neurite outgrowth, or phenotypic differentiation of cortical neuronal cells and for inducing the proliferation of glial fibrillary acidic protein immunopositive cells, astrocytes. The selection of cortical cells for the bioassay is based on the prevalent expression of FGF-1 and FGF-2 in cortical structures  
10 and on the previously reported enhancement of cortical neuronal survival resulting from FGF-2 treatment. A thymidine incorporation assay, for example, can be used to elucidate an agonist or antagonist of the invention's activity on these cells.

Moreover, previous reports describing the biological effects of FGF-2 (basic FGF) on cortical or hippocampal neurons *in vitro* have demonstrated increases in both neuron survival  
15 and neurite outgrowth (Walicke et al., "Fibroblast growth factor promotes survival of dissociated hippocampal neurons and enhances neurite extension." *Proc. Natl. Acad. Sci. USA* 83:3012-3016. (1986), assay herein incorporated by reference in its entirety). However, reports from experiments done on PC-12 cells suggest that these two responses are not necessarily synonymous and may depend on not only which FGF is being tested but also on  
20 which receptor(s) are expressed on the target cells. Using the primary cortical neuronal culture paradigm, the ability of an agonist or antagonist of the invention to induce neurite outgrowth can be compared to the response achieved with FGF-2 using, for example, a thymidine incorporation assay.

25 Fibroblast and endothelial cell assays.

Human lung fibroblasts are obtained from Clonetics (San Diego, CA) and maintained in growth media from Clonetics. Dermal microvascular endothelial cells are obtained from Cell Applications (San Diego, CA). For proliferation assays, the human lung fibroblasts and dermal microvascular endothelial cells can be cultured at 5,000 cells/well in a 96-well plate  
30 for one day in growth medium. The cells are then incubated for one day in 0.1% BSA basal medium. After replacing the medium with fresh 0.1% BSA medium, the cells are incubated with the test proteins for 3 days. Alamar Blue (Alamar Biosciences, Sacramento, CA) is

added to each well to a final concentration of 10%. The cells are incubated for 4 hr. Cell viability is measured by reading in a CytoFluor fluorescence reader. For the PGE<sub>2</sub> assays, the human lung fibroblasts are cultured at 5,000 cells/well in a 96-well plate for one day. After a medium change to 0.1% BSA basal medium, the cells are incubated with FGF-2 or agonists or antagonists of the invention with or without IL-1 $\alpha$  for 24 hours. The supernatants are collected and assayed for PGE<sub>2</sub> by EIA kit (Cayman, Ann Arbor, MI). For the IL-6 assays, the human lung fibroblasts are cultured at 5,000 cells/well in a 96-well plate for one day. After a medium change to 0.1% BSA basal medium, the cells are incubated with FGF-2 or with or without agonists or antagonists of the invention IL-1 $\alpha$  for 24 hours. The supernatants are collected and assayed for IL-6 by ELISA kit (Endogen, Cambridge, MA).

Human lung fibroblasts are cultured with FGF-2 or agonists or antagonists of the invention for 3 days in basal medium before the addition of Alamar Blue to assess effects on growth of the fibroblasts. FGF-2 should show a stimulation at 10 - 2500 ng/ml which can be used to compare stimulation with agonists or antagonists of the invention.

#### Parkinson Models.

The loss of motor function in Parkinson's disease is attributed to a deficiency of striatal dopamine resulting from the degeneration of the nigrostriatal dopaminergic projection neurons. An animal model for Parkinson's that has been extensively characterized involves the systemic administration of 1-methyl-4 phenyl 1,2,3,6-tetrahydropyridine (MPTP). In the CNS, MPTP is taken-up by astrocytes and catabolized by monoamine oxidase B to 1-methyl-4-phenyl pyridine (MPP<sup>+</sup>) and released. Subsequently, MPP<sup>+</sup> is actively accumulated in dopaminergic neurons by the high-affinity reuptake transporter for dopamine. MPP<sup>+</sup> is then concentrated in mitochondria by the electrochemical gradient and selectively inhibits nicotinamide adenine disphosphate: ubiquinone oxidoreductionase (complex I), thereby interfering with electron transport and eventually generating oxygen radicals.

It has been demonstrated in tissue culture paradigms that FGF-2 (basic FGF) has trophic activity towards nigral dopaminergic neurons (Ferrari et al., Dev. Biol. 1989). Recently, Dr. Unsicker's group has demonstrated that administering FGF-2 in gel foam implants in the striatum results in the near complete protection of nigral dopaminergic neurons from the toxicity associated with MPTP exposure (Otto and Unsicker, J. Neuroscience, 1990).

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Based on the data with FGF-2, agonists or antagonists of the invention can be evaluated to determine whether it has an action similar to that of FGF-2 in enhancing dopaminergic neuronal survival *in vitro* and it can also be tested *in vivo* for protection of dopaminergic neurons in the striatum from the damage associated with MPTP treatment. The potential effect of an agonist or antagonist of the invention is first examined *in vitro* in a dopaminergic neuronal cell culture paradigm. The cultures are prepared by dissecting the midbrain floor plate from gestation day 14 Wistar rat embryos. The tissue is dissociated with trypsin and seeded at a density of 200,000 cells/cm<sup>2</sup> on polyorthinine-laminin coated glass coverslips. The cells are maintained in Dulbecco's Modified Eagle's medium and F12 medium containing hormonal supplements (N1). The cultures are fixed with paraformaldehyde after 8 days *in vitro* and are processed for tyrosine hydroxylase, a specific marker for dopaminergic neurons, immunohistochemical staining. Dissociated cell cultures are prepared from embryonic rats. The culture medium is changed every third day and the factors are also added at that time.

Since the dopaminergic neurons are isolated from animals at gestation day 14, a developmental time which is past the stage when the dopaminergic precursor cells are proliferating, an increase in the number of tyrosine hydroxylase immunopositive neurons would represent an increase in the number of dopaminergic neurons surviving *in vitro*. Therefore, if an agonist or antagonist of the invention acts to prolong the survival of dopaminergic neurons, it would suggest that the agonist or antagonist may be involved in Parkinson's Disease.

The studies described in this example tested activity of agonists or antagonists of the invention. However, one skilled in the art could easily modify the exemplified studies to test the activity of polynucleotides or polypeptides of the invention (e.g., gene therapy).

### ***Example 25: The Effect of Agonists or Antagonists of the Invention on the Growth of Vascular Endothelial Cells***

On day 1, human umbilical vein endothelial cells (HUVEC) are seeded at  $2.5 \times 10^4$  cells/35 mm dish density in M199 medium containing 4% fetal bovine serum (FBS), 16 units/ml heparin, and 50 units/ml endothelial cell growth supplements (ECGS, Biotechnology,

Inc.). On day 2, the medium is replaced with M199 containing 10% FBS, 8 units/ml heparin. An agonist or antagonist of the invention, and positive controls, such as VEGF and basic FGF (bFGF) are added, at varying concentrations. On days 4 and 6, the medium is replaced. On day 8, cell number is determined with a Coulter Counter.

5 An increase in the number of HUVEC cells indicates that the compound of the invention may proliferate vascular endothelial cells, while a decrease in the number of HUVEC cell indicates that the compound of the invention inhibits vascular endothelial cells.

The studies described in this example tested activity of a polypeptide of the invention. However, one skilled in the art could easily modify the exemplified studies to test the activity  
10 of polynucleotides (e.g., gene therapy), agonists, and/or antagonists of the invention.

### ***Example 26: Rat Corneal Wound Healing Model***

This animal model shows the effect of an agonist or antagonist of the invention on  
15 neovascularization. The experimental protocol includes:

- a) Making a 1-1.5 mm long incision from the center of cornea into the stromal layer.
- b) Inserting a spatula below the lip of the incision facing the outer corner of the eye.
- 20 c) Making a pocket (its base is 1-1.5 mm from the edge of the eye).
- d) Positioning a pellet, containing 50ng- 5ug of an agonist or antagonist of the invention, within the pocket.
- e) Treatment with an agonist or antagonist of the invention can also be applied topically to the corneal wounds in a dosage range of 20mg - 500mg (daily treatment for five  
25 days).

The studies described in this example tested activity of agonists or antagonists of the invention. However, one skilled in the art could easily modify the exemplified studies to test the activity of polynucleotides or polypeptides of the invention (e.g., gene therapy).

### ***Example 27: Diabetic Mouse and Glucocorticoid-Impaired Wound Healing Models***

A. *Diabetic db+/db+ Mouse Model.*

To demonstrate that an agonist or antagonist of the invention accelerates the healing process, the genetically diabetic mouse model of wound healing is used. The full thickness wound healing model in the db+/db+ mouse is a well characterized, clinically relevant and reproducible model of impaired wound healing. Healing of the diabetic wound is dependent on formation of granulation tissue and re-epithelialization rather than contraction (Gartner, M.H. *et al.*, *J. Surg. Res.* 52:389 (1992); Greenhalgh, D.G. *et al.*, *Am. J. Pathol.* 136:1235 (1990)).

The diabetic animals have many of the characteristic features observed in Type II diabetes mellitus. Homozygous (db+/db+) mice are obese in comparison to their normal heterozygous (db+/+m) littermates. Mutant diabetic (db+/db+) mice have a single autosomal recessive mutation on chromosome 4 (db+) (Coleman *et al.* *Proc. Natl. Acad. Sci. USA* 77:283-293 (1982)). Animals show polyphagia, polydipsia and polyuria. Mutant diabetic mice (db+/db+) have elevated blood glucose, increased or normal insulin levels, and suppressed cell-mediated immunity (Mandel *et al.*, *J. Immunol.* 120:1375 (1978); Debray-Sachs, M. *et al.*, *Clin. Exp. Immunol.* 51(1):1-7 (1983); Leiter *et al.*, *Am. J. of Pathol.* 114:46-55 (1985)). Peripheral neuropathy, myocardial complications, and microvascular lesions, basement membrane thickening and glomerular filtration abnormalities have been described in these animals (Norido, F. *et al.*, *Exp. Neurol.* 83(2):221-232 (1984); Robertson *et al.*, *Diabetes* 29(1):60-67 (1980); Giacomelli *et al.*, *Lab Invest.* 40(4):460-473 (1979); Coleman, D.L., *Diabetes* 31 (Suppl):1-6 (1982)). These homozygous diabetic mice develop hyperglycemia that is resistant to insulin analogous to human type II diabetes (Mandel *et al.*, *J. Immunol.* 120:1375-1377 (1978)).

The characteristics observed in these animals suggests that healing in this model may be similar to the healing observed in human diabetes (Greenhalgh, *et al.*, *Am. J. of Pathol.* 136:1235-1246 (1990)).

Genetically diabetic female C57BL/KsJ (db+/db+) mice and their non-diabetic (db+/+m) heterozygous littermates are used in this study (Jackson Laboratories). The animals are purchased at 6 weeks of age and are 8 weeks old at the beginning of the study. Animals are individually housed and received food and water ad libitum. All manipulations are performed using aseptic techniques. The experiments are conducted according to the

rules and guidelines of Human Genome Sciences, Inc. Institutional Animal Care and Use Committee and the Guidelines for the Care and Use of Laboratory Animals.

Wounding protocol is performed according to previously reported methods (Tsuboi, R. and Rifkin, D.B., *J. Exp. Med.* 172:245-251 (1990)). Briefly, on the day of wounding, animals are anesthetized with an intraperitoneal injection of Avertin (0.01 mg/mL), 2,2,2-tribromoethanol and 2-methyl-2-butanol dissolved in deionized water. The dorsal region of the animal is shaved and the skin washed with 70% ethanol solution and iodine. The surgical area is dried with sterile gauze prior to wounding. An 8 mm full-thickness wound is then created using a Keyes tissue punch. Immediately following wounding, the surrounding skin is gently stretched to eliminate wound expansion. The wounds are left open for the duration of the experiment. Application of the treatment is given topically for 5 consecutive days commencing on the day of wounding. Prior to treatment, wounds are gently cleansed with sterile saline and gauze sponges.

Wounds are visually examined and photographed at a fixed distance at the day of surgery and at two day intervals thereafter. Wound closure is determined by daily measurement on days 1-5 and on day 8. Wounds are measured horizontally and vertically using a calibrated Jameson caliper. Wounds are considered healed if granulation tissue is no longer visible and the wound is covered by a continuous epithelium.

An agonist or antagonist of the invention is administered using at a range different doses, from 4mg to 500mg per wound per day for 8 days in vehicle. Vehicle control groups received 50mL of vehicle solution.

Animals are euthanized on day 8 with an intraperitoneal injection of sodium pentobarbital (300mg/kg). The wounds and surrounding skin are then harvested for histology and immunohistochemistry. Tissue specimens are placed in 10% neutral buffered formalin in tissue cassettes between biopsy sponges for further processing.

Three groups of 10 animals each (5 diabetic and 5 non-diabetic controls) are evaluated: 1) Vehicle placebo control, 2) untreated group, and 3) treated group.

Wound closure is analyzed by measuring the area in the vertical and horizontal axis and obtaining the total square area of the wound. Contraction is then estimated by establishing the differences between the initial wound area (day 0) and that of post treatment (day 8). The wound area on day 1 is 64mm<sup>2</sup>, the corresponding size of the dermal punch. Calculations are made using the following formula:

[Open area on day 8] - [Open area on day 1] / [Open area on day 1]

Specimens are fixed in 10% buffered formalin and paraffin embedded blocks are sectioned  
5 perpendicular to the wound surface (5mm) and cut using a Reichert-Jung microtome. Routine hematoxylin-eosin (H&E) staining is performed on cross-sections of bisected wounds. Histologic examination of the wounds are used to assess whether the healing process and the morphologic appearance of the repaired skin is altered by treatment with an agonist or antagonist of the invention. This assessment included verification of the presence  
10 of cell accumulation, inflammatory cells, capillaries, fibroblasts, re-epithelialization and epidermal maturity (Greenhalgh, D.G. *et al.*, *Am. J. Pathol.* 136:1235 (1990)). A calibrated lens micrometer is used by a blinded observer.

Tissue sections are also stained immunohistochemically with a polyclonal rabbit anti-human keratin antibody using ABC Elite detection system. Human skin is used as a positive tissue  
15 control while non-immune IgG is used as a negative control. Keratinocyte growth is determined by evaluating the extent of reepithelialization of the wound using a calibrated lens micrometer.

Proliferating cell nuclear antigen/cyclin (PCNA) in skin specimens is demonstrated by using anti-PCNA antibody (1:50) with an ABC Elite detection system. Human colon  
20 cancer served as a positive tissue control and human brain tissue is used as a negative tissue control. Each specimen included a section with omission of the primary antibody and substitution with non-immune mouse IgG. Ranking of these sections is based on the extent of proliferation on a scale of 0-8, the lower side of the scale reflecting slight proliferation to the higher side reflecting intense proliferation.

25 Experimental data are analyzed using an unpaired t test. A p value of < 0.05 is considered significant.

#### *B. Steroid Impaired Rat Model*

The inhibition of wound healing by steroids has been well documented in various *in*  
30 *vitro* and *in vivo* systems (Wahl, Glucocorticoids and Wound healing. In: Anti-Inflammatory Steroid Action: Basic and Clinical Aspects. 280-302 (1989); Wahlet *et al.*, *J. Immunol.* 115: 476-481 (1975); Werb *et al.*, *J. Exp. Med.* 147:1684-1694 (1978)). Glucocorticoids retard



wound healing by inhibiting angiogenesis, decreasing vascular permeability (Ebert *et al.*, *An. Intern. Med.* 37:701-705 (1952)), fibroblast proliferation, and collagen synthesis (Beck *et al.*, *Growth Factors*. 5: 295-304 (1991); Haynes *et al.*, *J. Clin. Invest.* 61: 703-797 (1978)) and producing a transient reduction of circulating monocytes (Haynes *et al.*, *J. Clin. Invest.* 61: 703-797 (1978); Wahl, "Glucocorticoids and wound healing", *In: Antiinflammatory Steroid Action: Basic and Clinical Aspects*, Academic Press, New York, pp. 280-302 (1989)). The systemic administration of steroids to impaired wound healing is a well establish phenomenon in rats (Beck *et al.*, *Growth Factors*. 5: 295-304 (1991); Haynes *et al.*, *J. Clin. Invest.* 61: 703-797 (1978); Wahl, "Glucocorticoids and wound healing", *In: Antiinflammatory Steroid Action: Basic and Clinical Aspects*, Academic Press, New York, pp. 280-302 (1989); Pierce *et al.*, *Proc. Natl. Acad. Sci. USA* 86: 2229-2233 (1989)).

To demonstrate that an agonist or antagonist of the invention can accelerate the healing process, the effects of multiple topical applications of the agonist or antagonist on full thickness excisional skin wounds in rats in which healing has been impaired by the systemic administration of methylprednisolone is assessed.

Young adult male Sprague Dawley rats weighing 250-300 g (Charles River Laboratories) are used in this example. The animals are purchased at 8 weeks of age and are 9 weeks old at the beginning of the study. The healing response of rats is impaired by the systemic administration of methylprednisolone (17mg/kg/rat intramuscularly) at the time of wounding. Animals are individually housed and received food and water *ad libitum*. All manipulations are performed using aseptic techniques. This study is conducted according to the rules and guidelines of Human Genome Sciences, Inc. Institutional Animal Care and Use Committee and the Guidelines for the Care and Use of Laboratory Animals.

The wounding protocol is followed according to section A, above. On the day of wounding, animals are anesthetized with an intramuscular injection of ketamine (50 mg/kg) and xylazine (5 mg/kg). The dorsal region of the animal is shaved and the skin washed with 70% ethanol and iodine solutions. The surgical area is dried with sterile gauze prior to wounding. An 8 mm full-thickness wound is created using a Keyes tissue punch. The wounds are left open for the duration of the experiment. Applications of the testing materials are given topically once a day for 7 consecutive days commencing on the day of wounding and subsequent to methylprednisolone administration. Prior to treatment, wounds are gently cleansed with sterile saline and gauze sponges.

Wounds are visually examined and photographed at a fixed distance at the day of wounding and at the end of treatment. Wound closure is determined by daily measurement on days 1-5 and on day 8. Wounds are measured horizontally and vertically using a calibrated Jameson caliper. Wounds are considered healed if granulation tissue is no longer visible and the wound is covered by a continuous epithelium.

The agonist or antagonist of the invention is administered using at a range different doses, from 4mg to 500mg per wound per day for 8 days in vehicle. Vehicle control groups received 50mL of vehicle solution.

Animals are euthanized on day 8 with an intraperitoneal injection of sodium pentobarbital (300mg/kg). The wounds and surrounding skin are then harvested for histology. Tissue specimens are placed in 10% neutral buffered formalin in tissue cassettes between biopsy sponges for further processing.

Four groups of 10 animals each (5 with methylprednisolone and 5 without glucocorticoid) are evaluated: 1) Untreated group 2) Vehicle placebo control 3) treated groups.

Wound closure is analyzed by measuring the area in the vertical and horizontal axis and obtaining the total area of the wound. Closure is then estimated by establishing the differences between the initial wound area (day 0) and that of post treatment (day 8). The wound area on day 1 is 64mm<sup>2</sup>, the corresponding size of the dermal punch. Calculations are made using the following formula:

$$[\text{Open area on day 8}] - [\text{Open area on day 1}] / [\text{Open area on day 1}]$$

Specimens are fixed in 10% buffered formalin and paraffin embedded blocks are sectioned perpendicular to the wound surface (5mm) and cut using an Olympus microtome. Routine hematoxylin-eosin (H&E) staining is performed on cross-sections of bisected wounds. Histologic examination of the wounds allows assessment of whether the healing process and the morphologic appearance of the repaired skin is improved by treatment with an agonist or antagonist of the invention. A calibrated lens micrometer is used by a blinded observer to determine the distance of the wound gap.

Experimental data are analyzed using an unpaired t test. A p value of < 0.05 is considered significant.

The studies described in this example tested activity of agonists or antagonists of the invention. However, one skilled in the art could easily modify the exemplified studies to test the activity of polynucleotides or polypeptides of the invention (e.g., gene therapy).

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### ***Example 28: Lymphadema Animal Model***

The purpose of this experimental approach is to create an appropriate and consistent lymphedema model for testing the therapeutic effects of an agonist or antagonist of the invention in lymphangiogenesis and re-establishment of the lymphatic circulatory system in the rat hind limb. Effectiveness is measured by swelling volume of the affected limb, quantification of the amount of lymphatic vasculature, total blood plasma protein, and histopathology. Acute lymphedema is observed for 7-10 days. Perhaps more importantly, the chronic progress of the edema is followed for up to 3-4 weeks.

15 Prior to beginning surgery, blood sample is drawn for protein concentration analysis. Male rats weighing approximately ~350g are dosed with Pentobarbital. Subsequently, the right legs are shaved from knee to hip. The shaved area is swabbed with gauze soaked in 70% EtOH. Blood is drawn for serum total protein testing. Circumference and volumetric measurements are made prior to injecting dye into paws after marking 2 measurement levels  
20 (0.5 cm above heel, at mid-pt of dorsal paw). The intradermal dorsum of both right and left paws are injected with 0.05 ml of 1% Evan's Blue. Circumference and volumetric measurements are then made following injection of dye into paws.

Using the knee joint as a landmark, a mid-leg inguinal incision is made circumferentially allowing the femoral vessels to be located. Forceps and hemostats are used  
25 to dissect and separate the skin flaps. After locating the femoral vessels, the lymphatic vessel that runs along side and underneath the vessel(s) is located. The main lymphatic vessels in this area are then electrically coagulated or suture ligated.

Using a microscope, muscles in back of the leg (near the semitendinosus and adductors) are bluntly dissected. The popliteal lymph node is then located. The 2 proximal  
30 and 2 distal lymphatic vessels and distal blood supply of the popliteal node are then and ligated by suturing. The popliteal lymph node, and any accompanying adipose tissue, is then removed by cutting connective tissues.

Care is taken to control any mild bleeding resulting from this procedure. After lymphatics are occluded, the skin flaps are sealed by using liquid skin (Vetbond) (AJ Buck). The separated skin edges are sealed to the underlying muscle tissue while leaving a gap of ~0.5 cm around the leg. Skin also may be anchored by suturing to underlying muscle when  
5 necessary.

To avoid infection, animals are housed individually with mesh (no bedding). Recovering animals are checked daily through the optimal edematous peak, which typically occurred by day 5-7. The plateau edematous peak are then observed. To evaluate the intensity of the lymphedema, the circumference and volumes of 2 designated places on each  
10 paw before operation and daily for 7 days are measured. The effect plasma proteins on lymphedema is determined and whether protein analysis is a useful testing perimeter is also investigated. The weights of both control and edematous limbs are evaluated at 2 places. Analysis is performed in a blind manner.

Circumference Measurements: Under brief gas anesthetic to prevent limb movement,  
15 a cloth tape is used to measure limb circumference. Measurements are done at the ankle bone and dorsal paw by 2 different people then those 2 readings are averaged. Readings are taken from both control and edematous limbs.

Volumetric Measurements: On the day of surgery, animals are anesthetized with Pentobarbital and are tested prior to surgery. For daily volumetrics animals are under brief  
20 halothane anesthetic (rapid immobilization and quick recovery), both legs are shaved and equally marked using waterproof marker on legs. Legs are first dipped in water, then dipped into instrument to each marked level then measured by Buxco edema software(Chen/Victor). Data is recorded by one person, while the other is dipping the limb to marked area.

Blood-plasma protein measurements: Blood is drawn, spun, and serum separated  
25 prior to surgery and then at conclusion for total protein and Ca<sup>2+</sup> comparison.

Limb Weight Comparison: After drawing blood, the animal is prepared for tissue collection. The limbs are amputated using a quillitine, then both experimental and control legs are cut at the ligature and weighed. A second weighing is done as the tibio-cacaneal joint is disarticulated and the foot is weighed.

30 Histological Preparations: The transverse muscle located behind the knee (popliteal) area is dissected and arranged in a metal mold, filled with freezeGel, dipped into cold

methylbutane, placed into labeled sample bags at - 80EC until sectioning. Upon sectioning, the muscle is observed under fluorescent microscopy for lymphatics..

The studies described in this example tested activity of agonists or antagonists of the invention. However, one skilled in the art could easily modify the exemplified studies to test  
5 the activity of polynucleotides or polypeptides of the invention (e.g., gene therapy).

***Example 29: Suppression of TNF alpha-induced adhesion molecule  
expression by a Agonist or Antagonist of the Invention***

10 The recruitment of lymphocytes to areas of inflammation and angiogenesis involves specific receptor-ligand interactions between cell surface adhesion molecules (CAMs) on lymphocytes and the vascular endothelium. The adhesion process, in both normal and pathological settings, follows a multi-step cascade that involves intercellular adhesion molecule-1 (ICAM-1), vascular cell adhesion molecule-1 (VCAM-1), and endothelial  
15 leukocyte adhesion molecule-1 (E-selectin) expression on endothelial cells (EC). The expression of these molecules and others on the vascular endothelium determines the efficiency with which leukocytes may adhere to the local vasculature and extravasate into the local tissue during the development of an inflammatory response. The local concentration of cytokines and growth factor participate in the modulation of the expression of these CAMs.

20 Tumor necrosis factor alpha (TNF-a), a potent proinflammatory cytokine, is a stimulator of all three CAMs on endothelial cells and may be involved in a wide variety of inflammatory responses, often resulting in a pathological outcome.

The potential of an agonist or antagonist of the invention to mediate a suppression of TNF-a induced CAM expression can be examined. A modified ELISA assay which uses ECs as a  
25 solid phase absorbent is employed to measure the amount of CAM expression on TNF-a treated ECs when co-stimulated with a member of the FGF family of proteins.

To perform the experiment, human umbilical vein endothelial cell (HUVEC) cultures are obtained from pooled cord harvests and maintained in growth medium (EGM-2; Clonetics, San Diego, CA) supplemented with 10% FCS and 1% penicillin/streptomycin in a  
30 37 degree C humidified incubator containing 5% CO<sub>2</sub>. HUVECs are seeded in 96-well plates at concentrations of 1 x 10<sup>4</sup> cells/well in EGM medium at 37 degree C for 18-24 hrs or until confluent. The monolayers are subsequently washed 3 times with a serum-free solution

of RPMI-1640 supplemented with 100 U/ml penicillin and 100 mg/ml streptomycin, and treated with a given cytokine and/or growth factor(s) for 24 h at 37 degree C. Following incubation, the cells are then evaluated for CAM expression.

Human Umbilical Vein Endothelial cells (HUVECs) are grown in a standard 96 well plate to confluence. Growth medium is removed from the cells and replaced with 90 ul of 199 Medium (10% FBS). Samples for testing and positive or negative controls are added to the plate in triplicate (in 10 ul volumes). Plates are incubated at 37 degree C for either 5 h (selectin and integrin expression) or 24 h (integrin expression only). Plates are aspirated to remove medium and 100 µl of 0.1% paraformaldehyde-PBS(with Ca++ and Mg++) is added to each well. Plates are held at 4°C for 30 min.

Fixative is then removed from the wells and wells are washed 1X with PBS(+Ca,Mg)+0.5% BSA and drained. Do not allow the wells to dry. Add 10 µl of diluted primary antibody to the test and control wells. Anti-ICAM-1-Biotin, Anti-VCAM-1-Biotin and Anti-E-selectin-Biotin are used at a concentration of 10 µg/ml (1:10 dilution of 0.1 mg/ml stock antibody). Cells are incubated at 37°C for 30 min. in a humidified environment. Wells are washed X3 with PBS(+Ca,Mg)+0.5% BSA.

Then add 20 µl of diluted ExtrAvidin-Alkaline Phosphatase (1:5,000 dilution) to each well and incubated at 37°C for 30 min. Wells are washed X3 with PBS(+Ca,Mg)+0.5% BSA. 1 tablet of p-Nitrophenol Phosphate pNPP is dissolved in 5 ml of glycine buffer (pH 10.4). 100 µl of pNPP substrate in glycine buffer is added to each test well. Standard wells in triplicate are prepared from the working dilution of the ExtrAvidin-Alkaline Phosphatase in glycine buffer: 1:5,000 ( $10^0$ ) >  $10^{-0.5}$  >  $10^{-1}$  >  $10^{-1.5}$ . 5 µl of each dilution is added to triplicate wells and the resulting AP content in each well is 5.50 ng, 1.74 ng, 0.55 ng, 0.18 ng. 100 µl of pNPP reagent must then be added to each of the standard wells. The plate must be incubated at 37°C for 4h. A volume of 50 µl of 3M NaOH is added to all wells. The results are quantified on a plate reader at 405 nm. The background subtraction option is used on blank wells filled with glycine buffer only. The template is set up to indicate the concentration of AP-conjugate in each standard well [ 5.50 ng; 1.74 ng; 0.55 ng; 0.18 ng]. Results are indicated as amount of bound AP-conjugate in each sample.

The studies described in this example tested activity of agonists or antagonists of the invention. However, one skilled in the art could easily modify the exemplified studies to test the activity of polynucleotides or polypeptides of the invention (e.g., gene therapy).

***Example 30: TAQMAN***

Quantitative PCR (QPCR). Total RNA from cells in culture are extracted by Trizol  
5 separation as recommended by the supplier (LifeTechnologies). (Total RNA is treated with  
DNase I (Life Technologies) to remove any contaminating genomic DNA before reverse  
transcription.) Total RNA (50 ng) is used in a one-step, 50ul, RT-QPCR, consisting of  
Taqman Buffer A (Perkin-Elmer; 50 mM KCl/10 mM Tris, pH 8.3), 5.5 mM MgCl<sub>2</sub>, 240 μM  
each dNTP, 0.4 units RNase inhibitor(Promega), 8%glycerol; 0.012% Tween-20, 0.05%  
10 gelatin, 0.3uM primers, 0.1uM probe, 0.025units Amplitaq Gold (Perkin-Elmer) and 2.5 units  
Superscript II reverse transcriptase (Life Technologies). As a control for genomic  
contamination, parallel reactions are setup without reverse transcriptase. The relative  
abundance of (unknown) and 18S RNAs are assessed by using the Applied Biosystems Prism  
7700 Sequence Detection System (Livak, K. J., Flood, S. J., Marmaro, J., Giusti, W. &  
15 Deetz, K. (1995) PCR Methods Appl. 4, 357-362). Reactions are carried out at 48°C for 30  
min, 95°C for 10 min, followed by 40 cycles of 95°C for 15s, 60°C for 1 min. Reactions are  
performed in triplicate.

Primers (f & r) and FRET probes sets are designed using Primer Express Software  
(Perkin-Elmer). Probes are labeled at the 5'-end with the reporter dye 6-FAM and on the 3'-  
20 end with the quencher dye TAMRA (Biosource International, Camarillo, CA or Perkin-  
Elmer).

***Example 31: Production Of Polypeptide of the Invention For High-  
Throughput Screening Assays***

25

The following protocol produces a supernatant containing polypeptide of the present  
invention to be tested. This supernatant can then be used in the Screening Assays described  
in Examples 33-42.

First, dilute Poly-D-Lysine (644 587 Boehringer-Mannheim) stock solution (1mg/ml  
30 in PBS) 1:20 in PBS (w/o calcium or magnesium 17-516F Biowhittaker) for a working  
solution of 50ug/ml. Add 200 ul of this solution to each well (24 well plates) and incubate at  
RT for 20 minutes. Be sure to distribute the solution over each well (note: a 12-channel

pipetter may be used with tips on every other channel). Aspirate off the Poly-D-Lysine solution and rinse with 1ml PBS (Phosphate Buffered Saline). The PBS should remain in the well until just prior to plating the cells and plates may be poly-lysine coated in advance for up to two weeks.

- 5        Plate 293T cells (do not carry cells past P+20) at  $2 \times 10^5$  cells/well in .5ml DMEM(Dulbecco's Modified Eagle Medium)(with 4.5 G/L glucose and L-glutamine (12-604F Biowhittaker))/10% heat inactivated FBS(14-503F Biowhittaker)/1x Penstrep(17-602E Biowhittaker). Let the cells grow overnight.

- 10        The next day, mix together in a sterile solution basin: 300 ul Lipofectamine (18324-012 Gibco/BRL) and 5ml Optimem I (31985070 Gibco/BRL)/96-well plate. With a small volume multi-channel pipetter, aliquot approximately 2ug of an expression vector containing a polynucleotide insert, produced by the methods described in Examples 8-10, into an appropriately labeled 96-well round bottom plate. With a multi-channel pipetter, add 50ul of the Lipofectamine/Optimem I mixture to each well. Pipette up and down gently to mix.
- 15        Incubate at RT 15-45 minutes. After about 20 minutes, use a multi-channel pipetter to add 150ul Optimem I to each well. As a control, one plate of vector DNA lacking an insert should be transfected with each set of transfections.

- Preferably, the transfection should be performed by tag-teaming the following tasks. By tag-teaming, hands on time is cut in half, and the cells do not spend too much time on
- 20        PBS. First, person A aspirates off the media from four 24-well plates of cells, and then person B rinses each well with .5-1ml PBS. Person A then aspirates off PBS rinse, and person B, using a 12-channel pipetter with tips on every other channel, adds the 200ul of DNA/Lipofectamine/Optimem I complex to the odd wells first, then to the even wells, to each row on the 24-well plates. Incubate at 37 degree C for 6 hours.

- 25        While cells are incubating, prepare appropriate media, either 1%BSA in DMEM with 1x penstrep, or HGS CHO-5 media (116.6 mg/L of CaCl<sub>2</sub> (anhyd); 0.00130 mg/L CuSO<sub>4</sub>·5H<sub>2</sub>O; 0.050 mg/L of Fe(NO<sub>3</sub>)<sub>3</sub>·9H<sub>2</sub>O; 0.417 mg/L of FeSO<sub>4</sub>·7H<sub>2</sub>O; 311.80 mg/L of KCl; 28.64 mg/L of MgCl<sub>2</sub>; 48.84 mg/L of MgSO<sub>4</sub>; 6995.50 mg/L of NaCl; 2400.0 mg/L of NaHCO<sub>3</sub>; 62.50 mg/L of NaH<sub>2</sub>PO<sub>4</sub>·H<sub>2</sub>O; 71.02 mg/L of Na<sub>2</sub>HPO<sub>4</sub>; .4320 mg/L of ZnSO<sub>4</sub>·7H<sub>2</sub>O; .002 mg/L of Arachidonic Acid ; 1.022 mg/L of Cholesterol; .070 mg/L of DL-alpha-Tocopherol-Acetate; 0.0520 mg/L of Linoleic Acid; 0.010 mg/L of Linolenic Acid; 0.010 mg/L of Myristic Acid; 0.010 mg/L of Oleic Acid; 0.010 mg/L of Palmitric Acid; 0.010 mg/L
- 30



of Palmitic Acid; 100 mg/L of Pluronic F-68; 0.010 mg/L of Stearic Acid; 2.20 mg/L of Tween 80; 4551 mg/L of D-Glucose; 130.85 mg/ml of L- Alanine; 147.50 mg/ml of L- Arginine-HCL; 7.50 mg/ml of L-Asparagine-H<sub>2</sub>O; 6.65 mg/ml of L-Aspartic Acid; 29.56 mg/ml of L-Cystine-2HCL-H<sub>2</sub>O; 31.29 mg/ml of L-Cystine-2HCL; 7.35 mg/ml of L-  
5 Glutamic Acid; 365.0 mg/ml of L-Glutamine; 18.75 mg/ml of Glycine; 52.48 mg/ml of L- Histidine-HCL-H<sub>2</sub>O; 106.97 mg/ml of L-Isoleucine; 111.45 mg/ml of L-Leucine; 163.75 mg/ml of L-Lysine HCL; 32.34 mg/ml of L-Methionine; 68.48 mg/ml of L-Phenylalanine; 40.0 mg/ml of L-Proline; 26.25 mg/ml of L-Serine; 101.05 mg/ml of L-Threonine; 19.22 mg/ml of L-Tryptophan; 91.79 mg/ml of L-Tyrosine-2Na-2H<sub>2</sub>O; and 99.65 mg/ml of L-  
10 Valine; 0.0035 mg/L of Biotin; 3.24 mg/L of D-Ca Pantothenate; 11.78 mg/L of Choline Chloride; 4.65 mg/L of Folic Acid; 15.60 mg/L of i-Inositol; 3.02 mg/L of Niacinamide; 3.00 mg/L of Pyridoxal HCL; 0.031 mg/L of Pyridoxine HCL; 0.319 mg/L of Riboflavin; 3.17 mg/L of Thiamine HCL; 0.365 mg/L of Thymidine; 0.680 mg/L of Vitamin B12; 25 mM of HEPES Buffer; 2.39 mg/L of Na Hypoxanthine; 0.105 mg/L of Lipoic Acid; 0.081 mg/L of  
15 Sodium Putrescine-2HCL; 55.0 mg/L of Sodium Pyruvate; 0.0067 mg/L of Sodium Selenite; 20uM of Ethanolamine; 0.122 mg/L of Ferric Citrate; 41.70 mg/L of Methyl-B-Cyclodextrin complexed with Linoleic Acid; 33.33 mg/L of Methyl-B-Cyclodextrin complexed with Oleic Acid; 10 mg/L of Methyl-B-Cyclodextrin complexed with Retinal Acetate. Adjust osmolarity to 327 mOsm) with 2mm glutamine and 1x penstrep. (BSA (81-068-3 Bayer)  
20 100gm dissolved in 1L DMEM for a 10% BSA stock solution). Filter the media and collect 50 ul for endotoxin assay in 15ml polystyrene conical.

The transfection reaction is terminated, preferably by tag-teaming, at the end of the incubation period. Person A aspirates off the transfection media, while person B adds 1.5ml appropriate media to each well. Incubate at 37 degree C for 45 or 72 hours depending on the  
25 media used: 1%BSA for 45 hours or CHO-5 for 72 hours.

On day four, using a 300ul multichannel pipetter, aliquot 600ul in one 1ml deep well plate and the remaining supernatant into a 2ml deep well. The supernatants from each well can then be used in the assays described in Examples 33-40.

It is specifically understood that when activity is obtained in any of the assays  
30 described below using a supernatant, the activity originates from either the polypeptide of the present invention directly (e.g., as a secreted protein) or by polypeptide of the present invention inducing expression of other proteins, which are then secreted into the supernatant.

Thus, the invention further provides a method of identifying the protein in the supernatant characterized by an activity in a particular assay.

### ***Example 32: Construction of GAS Reporter Construct***

5

One signal transduction pathway involved in the differentiation and proliferation of cells is called the Jaks-STATs pathway. Activated proteins in the Jaks-STATs pathway bind to gamma activation site "GAS" elements or interferon-sensitive responsive element ("ISRE"), located in the promoter of many genes. The binding of a protein to these elements  
10 alter the expression of the associated gene.

GAS and ISRE elements are recognized by a class of transcription factors called Signal Transducers and Activators of Transcription, or "STATs." There are six members of the STATs family. Stat1 and Stat3 are present in many cell types, as is Stat2 (as response to IFN-alpha is widespread). Stat4 is more restricted and is not in many cell types though it has  
15 been found in T helper class I, cells after treatment with IL-12. Stat5 was originally called mammary growth factor, but has been found at higher concentrations in other cells including myeloid cells. It can be activated in tissue culture cells by many cytokines.

The STATs are activated to translocate from the cytoplasm to the nucleus upon tyrosine phosphorylation by a set of kinases known as the Janus Kinase ("Jaks") family. Jaks  
20 represent a distinct family of soluble tyrosine kinases and include Tyk2, Jak1, Jak2, and Jak3. These kinases display significant sequence similarity and are generally catalytically inactive in resting cells.

The Jaks are activated by a wide range of receptors summarized in the Table below. (Adapted from review by Schidler and Darnell, Ann. Rev. Biochem. 64:621-51 (1995).) A  
25 cytokine receptor family, capable of activating Jaks, is divided into two groups: (a) Class 1 includes receptors for IL-2, IL-3, IL-4, IL-6, IL-7, IL-9, IL-11, IL-12, IL-15, Epo, PRL, GH, G-CSF, GM-CSF, LIF, CNTF, and thrombopoietin; and (b) Class 2 includes IFN-a, IFN-g, and IL-10. The Class 1 receptors share a conserved cysteine motif (a set of four conserved cysteines and one tryptophan) and a WSXWS motif (a membrane proximal region encoding  
30 Trp-Ser-Xxx-Trp-Ser (SEQ ID NO: 8556)).

Thus, on binding of a ligand to a receptor, Jaks are activated, which in turn activate STATs, which then translocate and bind to GAS elements. This entire process is

encompassed in the Jaks-STATs signal transduction pathway.

Therefore, activation of the Jaks-STATs pathway, reflected by the binding of the GAS or the ISRE element, can be used to indicate proteins involved in the proliferation and differentiation of cells. For example, growth factors and cytokines are known to activate the  
5 Jaks-STATs pathway. (See Table below.) Thus, by using GAS elements linked to reporter molecules, activators of the Jaks-STATs pathway can be identified.

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	<u>Ligand</u>	<u>JAKs</u>				<u>STATs GAS(elements) or ISRE</u>	
		<u>tyk2</u>	<u>Jak1</u>	<u>Jak2</u>	<u>Jak3</u>		
	<u>IFN family</u>						
5	IFN-a/B	+	+	-	-	1,2,3	ISRE
	IFN-g (IRF1>Lys6>IFP)		+	+	-	1	GAS
	Il-10	+	?	?	-	1,3	
10	<u>gp130 family</u>						
	IL-6 (Pleiotrohic) (IRF1>Lys6>IFP)	+	+	+	?	1,3	GAS
	Il-11(Pleiotrohic)	?	+	?	?	1,3	
	OnM(Pleiotrohic)	?	+	+	?	1,3	
15	LIF(Pleiotrohic)	?	+	+	?	1,3	
	CNTF(Pleiotrohic)	-/+	+	+	?	1,3	
	G-CSF(Pleiotrohic)	?	+	?	?	1,3	
	IL-12(Pleiotrohic)	+	-	+	+	1,3	
20	<u>g-C family</u>						
	IL-2 (lymphocytes)	-	+	-	+	1,3,5	GAS
	IL-4 (lymph/myeloid) >>Ly6)(IgH)	-	+	-	+	6	GAS (IRF1 = IFP
	IL-7 (lymphocytes)	-	+	-	+	5	GAS
25	IL-9 (lymphocytes)	-	+	-	+	5	GAS
	IL-13 (lymphocyte)	-	+	?	?	6	GAS
	IL-15	?	+	?	+	5	GAS
	<u>gp140 family</u>						
30	IL-3 (myeloid) (IRF1>IFP>>Ly6)	-	-	+	-	5	GAS
	IL-5 (myeloid)	-	-	+	-	5	GAS
	GM-CSF (myeloid)	-	-	+	-	5	GAS

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Growth hormone family

	GH	?	-	+	-	5	
	PRL	?	+/-	+	-	1,3,5	
5	EPO	?	-	+	-	5	GAS(B-
	CAS>IRF1=IFP>>Ly6)						

Receptor Tyrosine Kinases

10	EGF	?	+	+	-	1,3	GAS (IRF1)
	PDGF	?	+	+	-	1,3	
	CSF-1	?	+	+	-	1,3	GAS (not IRF1)

To construct a synthetic GAS containing promoter element, which is used in the Biological Assays described in Examples 33-34, a PCR based strategy is employed to generate a GAS-SV40 promoter sequence. The 5' primer contains four tandem copies of the GAS binding site found in the IRF1 promoter and previously demonstrated to bind STATs upon induction with a range of cytokines (Rothman et al., Immunity 1:457-468 (1994).), although other GAS or ISRE elements can be used instead. The 5' primer also contains 18bp of sequence complementary to the SV40 early promoter sequence and is flanked with an XhoI site. The sequence of the 5' primer is:

5':GCGCCTCGAGATTTCCTCGAAATCTAGATTTCCTCGAAATGATTTCCTCGAAAT  
10 GATTTCCTCGAAATATCTGCCATCTCAATTAG:3' (SEQ ID NO:8557)

The downstream primer is complementary to the SV40 promoter and is flanked with a Hind III site: 5':GCGGCAAGCTTTTGTCAAAGCCTAGGC:3' (SEQ ID NO:8558)

PCR amplification is performed using the SV40 promoter template present in the B-gal:promoter plasmid obtained from Clontech. The resulting PCR fragment is digested with XhoI/Hind III and subcloned into BLSK2-. (Stratagene.) Sequencing with forward and reverse primers confirms that the insert contains the following sequence:

5':CTCGAGATTTCCTCGAAATCTAGATTTCCTCGAAATGATTTCCTCGAAATGATT  
TCTCGAAATATCTGCCATCTCAATTAGTCAGCAACCATAGTCCCGCCCCCTAACT  
CCGCCCCATCCCGCCCCCTAACTCCGCCCCAGTTCGCCCCATTCTCCGCCCCATGGCTG  
20 ACTAATTTTTTTTATTTATGCAGAGGCCGAGGCCGCCTCGGCCTCTGAGCTATTCC  
AGAAGTAGTGAGGAGGCTTTTTTGGAGGCCCTAGGCTTTTGTCAAAGCTT:3'  
(SEQ ID NO:8559)

With this GAS promoter element linked to the SV40 promoter, a GAS:SEAP2 reporter construct is next engineered. Here, the reporter molecule is a secreted alkaline phosphatase, or "SEAP." Clearly, however, any reporter molecule can be instead of SEAP, in this or in any of the other Examples. Well known reporter molecules that can be used instead of SEAP include chloramphenicol acetyltransferase (CAT), luciferase, alkaline phosphatase, B-galactosidase, green fluorescent protein (GFP), or any protein detectable by an antibody.

30 The above sequence confirmed synthetic GAS-SV40 promoter element is subcloned into the pSEAP-Promoter vector obtained from Clontech using HindIII and XhoI, effectively replacing the SV40 promoter with the amplified GAS:SV40 promoter element, to create the

GAS-SEAP vector. However, this vector does not contain a neomycin resistance gene, and therefore, is not preferred for mammalian expression systems.

Thus, in order to generate mammalian stable cell lines expressing the GAS-SEAP reporter, the GAS-SEAP cassette is removed from the GAS-SEAP vector using SalI and NotI, and inserted into a backbone vector containing the neomycin resistance gene, such as pGFP-1 (Clontech), using these restriction sites in the multiple cloning site, to create the GAS-SEAP/Neo vector. Once this vector is transfected into mammalian cells, this vector can then be used as a reporter molecule for GAS binding as described in Examples 33-34.

Other constructs can be made using the above description and replacing GAS with a different promoter sequence. For example, construction of reporter molecules containing NFK-B and EGR promoter sequences are described in Examples 35 and 36. However, many other promoters can be substituted using the protocols described in these Examples. For instance, SRE, IL-2, NFAT, or Osteocalcin promoters can be substituted, alone or in combination (e.g., GAS/NF-KB/EGR, GAS/NF-KB, IL-2/NFAT, or NF-KB/GAS). Similarly, other cell lines can be used to test reporter construct activity, such as HELA (epithelial), HUVEC (endothelial), Reh (B-cell), Saos-2 (osteoblast), HUVAC (aortic), or Cardiomyocyte.

### ***Example 33: High-Throughput Screening Assay for T-cell Activity.***

The following protocol is used to assess T-cell activity by identifying factors, and determining whether supernate containing a polypeptide of the invention proliferates and/or differentiates T-cells. T-cell activity is assessed using the GAS/SEAP/Neo construct produced in Example 32. Thus, factors that increase SEAP activity indicate the ability to activate the Jaks-STATS signal transduction pathway. The T-cell used in this assay is Jurkat T-cells (ATCC Accession No. TIB-152), although Molt-3 cells (ATCC Accession No. CRL-1552) and Molt-4 cells (ATCC Accession No. CRL-1582) cells can also be used.

Jurkat T-cells are lymphoblastic CD4+ Th1 helper cells. In order to generate stable cell lines, approximately 2 million Jurkat cells are transfected with the GAS-SEAP/neo vector using DMR1E-C (Life Technologies)(transfection procedure described below). The transfected cells are seeded to a density of approximately 20,000 cells per well and transfectants resistant to 1 mg/ml gentamicin selected. Resistant colonies are expanded and then

tested for their response to increasing concentrations of interferon gamma. The dose response of a selected clone is demonstrated.

Specifically, the following protocol will yield sufficient cells for 75 wells containing 200 ul of cells. Thus, it is either scaled up, or performed in multiple to generate sufficient  
5 cells for multiple 96 well plates. Jurkat cells are maintained in RPMI + 10% serum with 1%Pen-Strep. Combine 2.5 mls of OPTI-MEM (Life Technologies) with 10 ug of plasmid DNA in a T25 flask. Add 2.5 ml OPTI-MEM containing 50 ul of DMRIE-C and incubate at room temperature for 15-45 mins.

During the incubation period, count cell concentration, spin down the required  
10 number of cells ( $10^7$  per transfection), and resuspend in OPTI-MEM to a final concentration of  $10^7$  cells/ml. Then add 1ml of  $1 \times 10^7$  cells in OPTI-MEM to T25 flask and incubate at 37 degree C for 6 hrs. After the incubation, add 10 ml of RPMI + 15% serum.

The Jurkat:GAS-SEAP stable reporter lines are maintained in RPMI + 10% serum, 1 mg/ml Genticin, and 1% Pen-Strep. These cells are treated with supernatants containing  
15 polypeptide of the present invention or polypeptide of the present invention induced polypeptides as produced by the protocol described in Example 31.

On the day of treatment with the supernatant, the cells should be washed and resuspended in fresh RPMI + 10% serum to a density of 500,000 cells per ml. The exact number of cells required will depend on the number of supernatants being screened. For one  
20 96 well plate, approximately 10 million cells (for 10 plates, 100 million cells) are required.

Transfer the cells to a triangular reservoir boat, in order to dispense the cells into a 96 well dish, using a 12 channel pipette. Using a 12 channel pipette, transfer 200 ul of cells into each well (therefore adding 100, 000 cells per well).

After all the plates have been seeded, 50 ul of the supernatants are transferred directly  
25 from the 96 well plate containing the supernatants into each well using a 12 channel pipette. In addition, a dose of exogenous interferon gamma (0.1, 1.0, 10 ng) is added to wells H9, H10, and H11 to serve as additional positive controls for the assay.

The 96 well dishes containing Jurkat cells treated with supernatants are placed in an incubator for 48 hrs (note: this time is variable between 48-72 hrs). 35 ul samples from each  
30 well are then transferred to an opaque 96 well plate using a 12 channel pipette. The opaque plates should be covered (using sellophene covers) and stored at -20 degree C until SEAP assays are performed according to Example 37. The plates containing the remaining treated



cells are placed at 4 degree C and serve as a source of material for repeating the assay on a specific well if desired.

As a positive control, 100 Unit/ml interferon gamma can be used which is known to activate Jurkat T cells. Over 30 fold induction is typically observed in the positive control wells.

The above protocol may be used in the generation of both transient, as well as, stable transfected cells, which would be apparent to those of skill in the art.

***Example 34: High-Throughput Screening Assay Identifying Myeloid Activity.***

The following protocol is used to assess myeloid activity of polypeptide of the present invention by determining whether polypeptide of the present invention proliferates and/or differentiates myeloid cells. Myeloid cell activity is assessed using the GAS/SEAP/Neo construct produced in Example 32. Thus, factors that increase SEAP activity indicate the ability to activate the Jaks-STATS signal transduction pathway. The myeloid cell used in this assay is U937, a pre-monocyte cell line, although TF-1, HL60, or KG1 can be used.

To transiently transfect U937 cells with the GAS/SEAP/Neo construct produced in Example 32, a DEAE-Dextran method (Kharbanda et. al., 1994, Cell Growth & Differentiation, 5:259-265) is used. First, harvest  $2 \times 10^7$  U937 cells and wash with PBS. The U937 cells are usually grown in RPMI 1640 medium containing 10% heat-inactivated fetal bovine serum (FBS) supplemented with 100 units/ml penicillin and 100 mg/ml streptomycin.

Next, suspend the cells in 1 ml of 20 mM Tris-HCl (pH 7.4) buffer containing 0.5 mg/ml DEAE-Dextran, 8 ug GAS-SEAP2 plasmid DNA, 140 mM NaCl, 5 mM KCl, 375 uM  $\text{Na}_2\text{HPO}_4 \cdot 7\text{H}_2\text{O}$ , 1 mM  $\text{MgCl}_2$ , and 675 uM  $\text{CaCl}_2$ . Incubate at 37 degrees C for 45 min.

Wash the cells with RPMI 1640 medium containing 10% FBS and then resuspend in 10 ml complete medium and incubate at 37 degree C for 36 hr.

The GAS-SEAP/U937 stable cells are obtained by growing the cells in 400 ug/ml G418. The G418-free medium is used for routine growth but every one to two months, the cells should be re-grown in 400 ug/ml G418 for couple of passages.

These cells are tested by harvesting  $1 \times 10^8$  cells (this is enough for ten 96-well plates assay) and wash with PBS. Suspend the cells in 200 ml above described growth medium,

with a final density of  $5 \times 10^5$  cells/ml. Plate 200  $\mu$ l cells per well in the 96-well plate (or  $1 \times 10^5$  cells/well).

Add 50  $\mu$ l of the supernatant prepared by the protocol described in Example 31. Incubate at 37 degree C for 48 to 72 hr. As a positive control, 100 Unit/ml interferon gamma can be used which is known to activate U937 cells. Over 30 fold induction is typically observed in the positive control wells. SEAP assay the supernatant according to the protocol described in Example 37.

***Example 35: High-Throughput Screening Assay Identifying Neuronal Activity.***

When cells undergo differentiation and proliferation, a group of genes are activated through many different signal transduction pathways. One of these genes, EGR1 (early growth response gene 1), is induced in various tissues and cell types upon activation. The promoter of EGR1 is responsible for such induction. Using the EGR1 promoter linked to reporter molecules, activation of cells can be assessed by polypeptide of the present invention.

Particularly, the following protocol is used to assess neuronal activity in PC12 cell lines. PC12 cells (rat phenochromocytoma cells) are known to proliferate and/or differentiate by activation with a number of mitogens, such as TPA (tetradecanoyl phorbol acetate), NGF (nerve growth factor), and EGF (epidermal growth factor). The EGR1 gene expression is activated during this treatment. Thus, by stably transfecting PC12 cells with a construct containing an EGR promoter linked to SEAP reporter, activation of PC12 cells by polypeptide of the present invention can be assessed.

The EGR/SEAP reporter construct can be assembled by the following protocol. The EGR-1 promoter sequence (-633 to +1)(Sakamoto K et al., Oncogene 6:867-871 (1991)) can be PCR amplified from human genomic DNA using the following primers:

5' GCGCTCGAGGGATGACAGCGATAGAACCCCGG-3' (SEQ ID NO: 8560)

5' GCGAAGCTTCGCGACTCCCCGGATCCGCCTC-3' (SEQ ID NO: 8561)

Using the GAS:SEAP/Neo vector produced in Example 32, EGR1 amplified product can then be inserted into this vector. Linearize the GAS:SEAP/Neo vector using restriction enzymes XhoI/HindIII, removing the GAS/SV40 stuffer. Restrict the EGR1 amplified

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product with these same enzymes. Ligate the vector and the EGR1 promoter.

To prepare 96 well-plates for cell culture, two mls of a coating solution (1:30 dilution of collagen type I (Upstate Biotech Inc. Cat#08-115) in 30% ethanol (filter sterilized)) is added per one 10 cm plate or 50 ml per well of the 96-well plate, and allowed to air dry for 2 hr.

PC12 cells are routinely grown in RPMI-1640 medium (Bio Whittaker) containing 10% horse serum (JRH BIOSCIENCES, Cat. # 12449-78P), 5% heat-inactivated fetal bovine serum (FBS) supplemented with 100 units/ml penicillin and 100 ug/ml streptomycin on a precoated 10 cm tissue culture dish. One to four split is done every three to four days. Cells are removed from the plates by scraping and resuspended with pipetting up and down for more than 15 times.

Transfect the EGR/SEAP/Neo construct into PC12 using the Lipofectamine protocol described in Example 31. EGR-SEAP/PC12 stable cells are obtained by growing the cells in 300 ug/ml G418. The G418-free medium is used for routine growth but every one to two months, the cells should be re-grown in 300 ug/ml G418 for couple of passages.

To assay for neuronal activity, a 10 cm plate with cells around 70 to 80% confluent is screened by removing the old medium. Wash the cells once with PBS (Phosphate buffered saline). Then starve the cells in low serum medium (RPMI-1640 containing 1% horse serum and 0.5% FBS with antibiotics) overnight.

The next morning, remove the medium and wash the cells with PBS. Scrape off the cells from the plate, suspend the cells well in 2 ml low serum medium. Count the cell number and add more low serum medium to reach final cell density as  $5 \times 10^5$  cells/ml.

Add 200 ul of the cell suspension to each well of 96-well plate (equivalent to  $1 \times 10^5$  cells/well). Add 50 ul supernatant produced by Example 31, 37 degree C for 48 to 72 hr. As a positive control, a growth factor known to activate PC12 cells through EGR can be used, such as 50 ng/ul of Neuronal Growth Factor (NGF). Over fifty-fold induction of SEAP is typically seen in the positive control wells. SEAP assay the supernatant according to Example 37.

### ***Example 36: High-Throughput Screening Assay for T-cell Activity.***

NF-KB (Nuclear Factor KB) is a transcription factor activated by a wide variety of

agents including the inflammatory cytokines IL-1 and TNF, CD30 and CD40, lymphotoxin-alpha and lymphotoxin-beta, by exposure to LPS or thrombin, and by expression of certain viral gene products. As a transcription factor, NF-KB regulates the expression of genes involved in immune cell activation, control of apoptosis (NF-KB appears to shield cells from apoptosis), B and T-cell development, anti-viral and antimicrobial responses, and multiple stress responses.

In non-stimulated conditions, NF-KB is retained in the cytoplasm with I-KB (Inhibitor KB). However, upon stimulation, I-KB is phosphorylated and degraded, causing NF-KB to shuttle to the nucleus, thereby activating transcription of target genes. Target genes activated by NF-KB include IL-2, IL-6, GM-CSF, ICAM-1 and class I MHC.

Due to its central role and ability to respond to a range of stimuli, reporter constructs utilizing the NF-KB promoter element are used to screen the supernatants produced in Example 31. Activators or inhibitors of NF-KB would be useful in treating, preventing, and/or diagnosing diseases. For example, inhibitors of NF-KB could be used to treat those diseases related to the acute or chronic activation of NF-KB, such as rheumatoid arthritis.

To construct a vector containing the NF-KB promoter element, a PCR based strategy is employed. The upstream primer contains four tandem copies of the NF-KB binding site (GGGGACTTTCCC) (SEQ ID NO:8562), 18 bp of sequence complementary to the 5' end of the SV40 early promoter sequence, and is flanked with an XhoI site:

5':GCGGCCTCGAGGGGACTTTCCCGGGGACTTTCCGGGGACTTTCCGGGACTTTC  
CATCCTGCCATCTCAATTAG:3' (SEQ ID NO:8563)

The downstream primer is complementary to the 3' end of the SV40 promoter and is flanked with a Hind III site:

5':GCGGCAAGCTTTTGTCAAAGCCTAGGC:3' (SEQ ID NO:8558)

PCR amplification is performed using the SV40 promoter template present in the pB-gal:promoter plasmid obtained from Clontech. The resulting PCR fragment is digested with XhoI and Hind III and subcloned into BLSK2-. (Stratagene) Sequencing with the T7 and T3 primers confirms the insert contains the following sequence:

5':CTCGAGGGGACTTTCCCGGGGACTTTCCGGGGACTTTCCGGGACTTTCCATCTG  
CCATCTCAATTAGTCAGCAACCATAGTCCCGCCCCTAACTCCGCCCATCCCGCCC  
CTAACTCCGCCCAGTTCCGCCCATTTCTCCGCCCCATGGCTGACTAATTTTTTTTAT  
TTATGCAGAGGCCGAGGCCGCCTCGGCCTCTGAGCTATTCCAGAAGTAGTGAGG

AGGCTTTTTTGGAGGCCTAGGCTTTTGCAAAAAGCTT:3' (SEQ ID NO:8564)

Next, replace the SV40 minimal promoter element present in the pSEAP2-promoter plasmid (Clontech) with this NF-KB/SV40 fragment using XhoI and HindIII. However, this vector does not contain a neomycin resistance gene, and therefore, is not preferred for  
5 mammalian expression systems.

In order to generate stable mammalian cell lines, the NF-KB/SV40/SEAP cassette is removed from the above NF-KB/SEAP vector using restriction enzymes SalI and NotI, and inserted into a vector containing neomycin resistance. Particularly, the NF-KB/SV40/SEAP cassette was inserted into pGFP-1 (Clontech), replacing the GFP gene, after restricting pGFP-  
10 1 with SalI and NotI.

Once NF-KB/SV40/SEAP/Neo vector is created, stable Jurkat T-cells are created and maintained according to the protocol described in Example 33. Similarly, the method for assaying supernatants with these stable Jurkat T-cells is also described in Example 33. As a positive control, exogenous TNF alpha (0.1, 1, 10 ng) is added to wells H9, H10, and H11,  
15 with a 5-10 fold activation typically observed.

### ***Example 37: Assay for SEAP Activity.***

As a reporter molecule for the assays described in Examples 33-36, SEAP activity is  
20 assayed using the Tropix Phospho-light Kit (Cat. BP-400) according to the following general procedure. The Tropix Phospho-light Kit supplies the Dilution, Assay, and Reaction Buffers used below.

Prime a dispenser with the 2.5x Dilution Buffer and dispense 15 ul of 2.5x dilution buffer into Optiplates containing 35 ul of a supernatant. Seal the plates with a plastic sealer  
25 and incubate at 65 degree C for 30 min. Separate the Optiplates to avoid uneven heating.

Cool the samples to room temperature for 15 minutes. Empty the dispenser and prime with the Assay Buffer. Add 50 ml Assay Buffer and incubate at room temperature 5 min. Empty the dispenser and prime with the Reaction Buffer (see the table below). Add 50 ul Reaction Buffer and incubate at room temperature for 20 minutes. Since the intensity of the  
30 chemiluminescent signal is time dependent, and it takes about 10 minutes to read 5 plates on luminometer, one should treat 5 plates at each time and start the second set 10 minutes later.

Read the relative light unit in the luminometer. Set H12 as blank, and print the

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results. An increase in chemiluminescence indicates reporter activity.

## Reaction Buffer Formulation:

# of plates	Rxn buffer diluent (ml)	CSPD (ml)
10	60	3
11	65	3.25
12	70	3.5
13	75	3.75
14	80	4
15	85	4.25
16	90	4.5
17	95	4.75
18	100	5
19	105	5.25
20	110	5.5
21	115	5.75
22	120	6
23	125	6.25
24	130	6.5
25	135	6.75
26	140	7
27	145	7.25
28	150	7.5
29	155	7.75
30	160	8
31	165	8.25
32	170	8.5
33	175	8.75
34	180	9
35	185	9.25
36	190	9.5
37	195	9.75
38	200	10
39	205	10.25
40	210	10.5
41	215	10.75
42	220	11

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43	225	11.25
44	230	11.5
45	235	11.75
46	240	12
47	245	12.25
48	250	12.5
49	255	12.75
50	260	13

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***Example 38: High-Throughput Screening Assay Identifying Changes in Small Molecule Concentration and Membrane Permeability.***

5

Binding of a ligand to a receptor is known to alter intracellular levels of small molecules, such as calcium, potassium, sodium, and pH, as well as alter membrane potential. These alterations can be measured in an assay to identify supernatants which bind to receptors of a particular cell. Although the following protocol describes an assay for calcium, this protocol can easily be modified to detect changes in potassium, sodium, pH, membrane potential, or any other small molecule which is detectable by a fluorescent probe.

The following assay uses Fluorometric Imaging Plate Reader ("FLIPR") to measure changes in fluorescent molecules (Molecular Probes) that bind small molecules. Clearly, any fluorescent molecule detecting a small molecule can be used instead of the calcium fluorescent molecule, fluo-4 (Molecular Probes, Inc.; catalog no. F-14202), used here.

For adherent cells, seed the cells at 10,000 -20,000 cells/well in a Co-star black 96-well plate with clear bottom. The plate is incubated in a CO<sub>2</sub> incubator for 20 hours. The adherent cells are washed two times in Biotek washer with 200 ul of HBSS (Hank's Balanced Salt Solution) leaving 100 ul of buffer after the final wash.

A stock solution of 1 mg/ml fluo-4 is made in 10% pluronic acid DMSO. To load the cells with fluo-4, 50 ul of 12 ug/ml fluo-4 is added to each well. The plate is incubated at 37 degrees C in a CO<sub>2</sub> incubator for 60 min. The plate is washed four times in the Biotek washer with HBSS leaving 100 ul of buffer.

For non-adherent cells, the cells are spun down from culture media. Cells are re-suspended to 2-5x10<sup>6</sup> cells/ml with HBSS in a 50-ml conical tube. 4 ul of 1 mg/ml fluo-4

solution in 10% pluronic acid DMSO is added to each ml of cell suspension. The tube is then placed in a 37 degrees C water bath for 30-60 min. The cells are washed twice with HBSS, resuspended to  $1 \times 10^6$  cells/ml, and dispensed into a microplate, 100 ul/well. The plate is centrifuged at 1000 rpm for 5 min. The plate is then washed once in Denley Cell Wash with 200 ul, followed by an aspiration step to 100 ul final volume.

For a non-cell based assay, each well contains a fluorescent molecule, such as fluo-4. The supernatant is added to the well, and a change in fluorescence is detected.

To measure the fluorescence of intracellular calcium, the FLIPR is set for the following parameters: (1) System gain is 300-800 mW; (2) Exposure time is 0.4 second; (3) Camera F/stop is F/2; (4) Excitation is 488 nm; (5) Emission is 530 nm; and (6) Sample addition is 50 ul. Increased emission at 530 nm indicates an extracellular signaling event caused by the a molecule, either polypeptide of the present invention or a molecule induced by polypeptide of the present invention, which has resulted in an increase in the intracellular  $Ca^{++}$  concentration.

#### ***Example 40: High-Throughput Screening Assay Identifying Tyrosine Kinase Activity.***

The Protein Tyrosine Kinases (PTK) represent a diverse group of transmembrane and cytoplasmic kinases. Within the Receptor Protein Tyrosine Kinase (RPTK) group are receptors for a range of mitogenic and metabolic growth factors including the PDGF, FGF, EGF, NGF, HGF and Insulin receptor subfamilies. In addition there are a large family of RPTKs for which the corresponding ligand is unknown. Ligands for RPTKs include mainly secreted small proteins, but also membrane-bound and extracellular matrix proteins.

Activation of RPTK by ligands involves ligand-mediated receptor dimerization, resulting in transphosphorylation of the receptor subunits and activation of the cytoplasmic tyrosine kinases. The cytoplasmic tyrosine kinases include receptor associated tyrosine kinases of the src-family (e.g., src, yes, lck, lyn, fyn) and non-receptor linked and cytosolic protein tyrosine kinases, such as the Jak family, members of which mediate signal transduction triggered by the cytokine superfamily of receptors (e.g., the Interleukins, Interferons, GM-CSF, and Leptin).

Because of the wide range of known factors capable of stimulating tyrosine kinase



activity, identifying whether polypeptide of the present invention or a molecule induced by polypeptide of the present invention is capable of activating tyrosine kinase signal transduction pathways is of interest. Therefore, the following protocol is designed to identify such molecules capable of activating the tyrosine kinase signal transduction pathways.

5       Seed target cells (e.g., primary keratinocytes) at a density of approximately 25,000 cells per well in a 96 well Loprodyne Silent Screen Plates purchased from Nalge Nunc (Naperville, IL). The plates are sterilized with two 30 minute rinses with 100% ethanol, rinsed with water and dried overnight. Some plates are coated for 2 hr with 100 ml of cell culture grade type I collagen (50 mg/ml), gelatin (2%) or polylysine (50 mg/ml), all of which  
10       can be purchased from Sigma Chemicals (St. Louis, MO) or 10% Matrigel purchased from Becton Dickinson (Bedford, MA), or calf serum, rinsed with PBS and stored at 4 degree C. Cell growth on these plates is assayed by seeding 5,000 cells/well in growth medium and indirect quantitation of cell number through use of alamarBlue as described by the manufacturer Alamar Biosciences, Inc. (Sacramento, CA) after 48 hr. Falcon plate covers  
15       #3071 from Becton Dickinson (Bedford, MA) are used to cover the Loprodyne Silent Screen Plates. Falcon Microtest III cell culture plates can also be used in some proliferation experiments.

      To prepare extracts, A431 cells are seeded onto the nylon membranes of Loprodyne plates (20,000/200ml/well) and cultured overnight in complete medium. Cells are quiesced  
20       by incubation in serum-free basal medium for 24 hr. After 5-20 minutes treatment with EGF (60ng/ml) or 50 ul of the supernatant produced in Example 31, the medium was removed and 100 ml of extraction buffer ((20 mM HEPES pH 7.5, 0.15 M NaCl, 1% Triton X-100, 0.1% SDS, 2 mM Na<sub>3</sub>VO<sub>4</sub>, 2 mM Na<sub>4</sub>P<sub>2</sub>O<sub>7</sub> and a cocktail of protease inhibitors (# 1836170) obtained from Boehringer Mannheim (Indianapolis, IN) is added to each well and the plate  
25       is shaken on a rotating shaker for 5 minutes at 4°C. The plate is then placed in a vacuum transfer manifold and the extract filtered through the 0.45 mm membrane bottoms of each well using house vacuum. Extracts are collected in a 96-well catch/assay plate in the bottom of the vacuum manifold and immediately placed on ice. To obtain extracts clarified by centrifugation, the content of each well, after detergent solubilization for 5 minutes, is  
30       removed and centrifuged for 15 minutes at 4 degree C at 16,000 x g.

      Test the filtered extracts for levels of tyrosine kinase activity. Although many methods of detecting tyrosine kinase activity are known, one method is described here.

Generally, the tyrosine kinase activity of a supernatant is evaluated by determining its ability to phosphorylate a tyrosine residue on a specific substrate (a biotinylated peptide). Biotinylated peptides that can be used for this purpose include PSK1 (corresponding to amino acids 6-20 of the cell division kinase cdc2-p34) and PSK2 (corresponding to amino acids 1-17 of gastrin). Both peptides are substrates for a range of tyrosine kinases and are available from Boehringer Mannheim.

The tyrosine kinase reaction is set up by adding the following components in order. First, add 10ul of 5uM Biotinylated Peptide, then 10ul ATP/Mg<sup>2+</sup> (5mM ATP/50mM MgCl<sub>2</sub>), then 10ul of 5x Assay Buffer (40mM imidazole hydrochloride, pH7.3, 40 mM beta-glycerophosphate, 1mM EGTA, 100mM MgCl<sub>2</sub>, 5 mM MnCl<sub>2</sub>, 0.5 mg/ml BSA), then 5ul of Sodium Vanadate(1mM), and then 5ul of water. Mix the components gently and preincubate the reaction mix at 30 degree C for 2 min. Initiate the reaction by adding 10ul of the control enzyme or the filtered supernatant.

The tyrosine kinase assay reaction is then terminated by adding 10 ul of 120mM EDTA and place the reactions on ice.

Tyrosine kinase activity is determined by transferring 50 ul aliquot of reaction mixture to a microtiter plate (MTP) module and incubating at 37 degree C for 20 min. This allows the streptavidin coated 96 well plate to associate with the biotinylated peptide. Wash the MTP module with 300ul/well of PBS four times. Next add 75 ul of anti-phosphotyrosine antibody conjugated to horse radish peroxidase(anti-P-Tyr-POD(0.5u/ml)) to each well and incubate at 37 degree C for one hour. Wash the well as above.

Next add 100ul of peroxidase substrate solution (Boehringer Mannheim) and incubate at room temperature for at least 5 mins (up to 30 min). Measure the absorbance of the sample at 405 nm by using ELISA reader. The level of bound peroxidase activity is quantitated using an ELISA reader and reflects the level of tyrosine kinase activity.

#### ***Example 41: High-Throughput Screening Assay Identifying Phosphorylation Activity.***

As a potential alternative and/or compliment to the assay of protein tyrosine kinase activity described in Example 40, an assay which detects activation (phosphorylation) of major intracellular signal transduction intermediates can also be used. For example, as

described below one particular assay can detect tyrosine phosphorylation of the Erk-1 and Erk-2 kinases. However, phosphorylation of other molecules, such as Raf, JNK, p38 MAP, Map kinase kinase (MEK), MEK kinase, Src, Muscle specific kinase (MuSK), IRAK, Tec, and Janus, as well as any other phosphoserine, phosphotyrosine, or phosphothreonine molecule, can be detected by substituting these molecules for Erk-1 or Erk-2 in the following assay.

Specifically, assay plates are made by coating the wells of a 96-well ELISA plate with 0.1ml of protein G (1ug/ml) for 2 hr at room temp, (RT). The plates are then rinsed with PBS and blocked with 3% BSA/PBS for 1 hr at RT. The protein G plates are then treated with 2 commercial monoclonal antibodies (100ng/well) against Erk-1 and Erk-2 (1 hr at RT) (Santa Cruz Biotechnology). (To detect other molecules, this step can easily be modified by substituting a monoclonal antibody detecting any of the above described molecules.) After 3-5 rinses with PBS, the plates are stored at 4 degree C until use.

A431 cells are seeded at 20,000/well in a 96-well Loprodyne filterplate and cultured overnight in growth medium. The cells are then starved for 48 hr in basal medium (DMEM) and then treated with EGF (6ng/well) or 50 ul of the supernatants obtained in Example 31 for 5-20 minutes. The cells are then solubilized and extracts filtered directly into the assay plate.

After incubation with the extract for 1 hr at RT, the wells are again rinsed. As a positive control, a commercial preparation of MAP kinase (10ng/well) is used in place of A431 extract. Plates are then treated with a commercial polyclonal (rabbit) antibody (1ug/ml) which specifically recognizes the phosphorylated epitope of the Erk-1 and Erk-2 kinases (1 hr at RT). This antibody is biotinylated by standard procedures. The bound polyclonal antibody is then quantitated by successive incubations with Europium-streptavidin and Europium fluorescence enhancing reagent in the Wallac DELFIA instrument (time-resolved fluorescence). An increased fluorescent signal over background indicates a phosphorylation by polypeptide of the present invention or a molecule induced by polypeptide of the present invention.

#### ***Example 42: Assay for the Stimulation of Bone Marrow CD34+ Cell Proliferation.***

This assay is based on the ability of human CD34+ to proliferate in the presence of

hematopoietic growth factors and evaluates the ability of isolated polypeptides expressed in mammalian cells to stimulate proliferation of CD34+ cells.

It has been previously shown that most mature precursors will respond to only a single signal. More immature precursors require at least two signals to respond. Therefore, to test the effect of polypeptides on hematopoietic activity of a wide range of progenitor cells, the assay contains a given polypeptide in the presence or absence of other hematopoietic growth factors. Isolated cells are cultured for 5 days in the presence of Stem Cell Factor (SCF) in combination with tested sample. SCF alone has a very limited effect on the proliferation of bone marrow (BM) cells, acting in such conditions only as a "survival" factor. However, combined with any factor exhibiting stimulatory effect on these cells (e.g., IL-3), SCF will cause a synergistic effect. Therefore, if the tested polypeptide has a stimulatory effect on a hematopoietic progenitors, such activity can be easily detected. Since normal BM cells have a low level of cycling cells, it is likely that any inhibitory effect of a given polypeptide, or agonists or antagonists thereof, might not be detected. Accordingly, assays for an inhibitory effect on progenitors is preferably tested in cells that are first subjected to *in vitro* stimulation with SCF+IL-3, and then contacted with the compound that is being evaluated for inhibition of such induced proliferation.

Briefly, CD34+ cells are isolated using methods known in the art. The cells are thawed and resuspended in medium (QBSF 60 serum-free medium with 1% L-glutamine (500ml) Quality Biological, Inc., Gaithersburg, MD Cat# 160-204-101). After several gentle centrifugation steps at 200 x g, cells are allowed to rest for one hour. The cell count is adjusted to  $2.5 \times 10^5$  cells/ml. During this time, 100  $\mu$ l of sterile water is added to the peripheral wells of a 96-well plate. The cytokines that can be tested with a given polypeptide in this assay is rhSCF (R&D Systems, Minneapolis, MN, Cat# 255-SC) at 50 ng/ml alone and in combination with rhSCF and rhIL-3 (R&D Systems, Minneapolis, MN, Cat# 203-ML) at 30 ng/ml. After one hour, 10  $\mu$ l of prepared cytokines, 50  $\mu$ l of the supernatants prepared in Example 31 (supernatants at 1:2 dilution = 50  $\mu$ l) and 20  $\mu$ l of diluted cells are added to the media which is already present in the wells to allow for a final total volume of 100  $\mu$ l. The plates are then placed in a 37°C/5% CO<sub>2</sub> incubator for five days.

Eighteen hours before the assay is harvested, 0.5  $\mu$ Ci/well of [3H] Thymidine is added in a 10  $\mu$ l volume to each well to determine the proliferation rate. The experiment is terminated by harvesting the cells from each 96-well plate to a filtermat using the Tomtec

Harvester 96. After harvesting, the filtermats are dried, trimmed and placed into OmniFilter assemblies consisting of one OmniFilter plate and one OmniFilter Tray. 60 µl Microscint is added to each well and the plate sealed with TopSeal-A press-on sealing film. A bar code sticker is affixed to the first plate for counting. The sealed plates are then loaded and the level of radioactivity determined via the Packard Top Count and the printed data collected for analysis. The level of radioactivity reflects the amount of cell proliferation.

The studies described in this example test the activity of a given polypeptide to stimulate bone marrow CD34+ cell proliferation. One skilled in the art could easily modify the exemplified studies to test the activity of polynucleotides (e.g., gene therapy), antibodies, agonists, and/or antagonists and fragments and variants thereof. As a nonlimiting example, potential antagonists tested in this assay would be expected to inhibit cell proliferation in the presence of cytokines and/or to increase the inhibition of cell proliferation in the presence of cytokines and a given polypeptide. In contrast, potential agonists tested in this assay would be expected to enhance cell proliferation and/or to decrease the inhibition of cell proliferation in the presence of cytokines and a given polypeptide.

The ability of a gene to stimulate the proliferation of bone marrow CD34+ cells indicates that polynucleotides and polypeptides corresponding to the gene are useful for the diagnosis and treatment of disorders affecting the immune system and hematopoiesis. Representative uses are described in the "Immune Activity" and "Infectious Disease" sections above, and elsewhere herein.

### ***Example 43: Assay for Extracellular Matrix Enhanced Cell Response (EMECR).***

The objective of the Extracellular Matrix Enhanced Cell Response (EMECR) assay is to identify gene products (e.g., isolated polypeptides) that act on the hematopoietic stem cells in the context of the extracellular matrix (ECM) induced signal.

Cells respond to the regulatory factors in the context of signal(s) received from the surrounding microenvironment. For example, fibroblasts, and endothelial and epithelial stem cells fail to replicate in the absence of signals from the ECM. Hematopoietic stem cells can undergo self-renewal in the bone marrow, but not in *in vitro* suspension culture. The ability of stem cells to undergo self-renewal *in vitro* is dependent upon their interaction with the

stromal cells and the ECM protein fibronectin (fn). Adhesion of cells to fn is mediated by the  $\alpha_5\beta_1$  and  $\alpha_4\beta_1$  integrin receptors, which are expressed by human and mouse hematopoietic stem cells. The factor(s) which integrate with the ECM environment and responsible for stimulating stem cell self-renewal has not yet been identified. Discovery of such factors should be of great interest in gene therapy and bone marrow transplant applications

Briefly, polystyrene, non tissue culture treated, 96-well plates are coated with fn fragment at a coating concentration of  $0.2 \mu\text{g}/\text{cm}^2$ . Mouse bone marrow cells are plated (1,000 cells/well) in 0.2 ml of serum-free medium. Cells cultured in the presence of IL-3 (5 ng/ml) + SCF (50 ng/ml) would serve as the positive control, conditions under which little self-renewal but pronounced differentiation of the stem cells is to be expected. Gene products of the invention (e.g., including, but not limited to, polynucleotides and polypeptides of the present invention, and supernatants produced in Example 31), are tested with appropriate negative controls in the presence and absence of SCF(5.0 ng/ml), where test factor supernates represent 10% of the total assay volume. The plated cells are then allowed to grow by incubating in a low oxygen environment (5%  $\text{CO}_2$ , 7%  $\text{O}_2$ , and 88%  $\text{N}_2$ ) tissue culture incubator for 7 days. The number of proliferating cells within the wells is then quantitated by measuring thymidine incorporation into cellular DNA. Verification of the positive hits in the assay will require phenotypic characterization of the cells, which can be accomplished by scaling up of the culture system and using appropriate antibody reagents against cell surface antigens and FACScan.

One skilled in the art could easily modify the exemplified studies to test the activity of polynucleotides (e.g., gene therapy), antibodies, agonists, and/or antagonists and fragments and variants thereof.

If a particular polypeptide of the present invention is found to be a stimulator of hematopoietic progenitors, polynucleotides and polypeptides corresponding to the gene encoding said polypeptide may be useful for the diagnosis and treatment of disorders affecting the immune system and hematopoiesis. Representative uses are described in the "Immune Activity" and "Infectious Disease" sections above, and elsewhere herein. The gene product may also be useful in the expansion of stem cells and committed progenitors of various blood lineages, and in the differentiation and/or proliferation of various cell types.

Additionally, the polynucleotides and/or polypeptides of the gene of interest and/or

agonists and/or antagonists thereof, may also be employed to inhibit the proliferation and differentiation of hematopoietic cells and therefore may be employed to protect bone marrow stem cells from chemotherapeutic agents during chemotherapy. This antiproliferative effect may allow administration of higher doses of chemotherapeutic agents and, therefore, more effective chemotherapeutic treatment.

Moreover, polynucleotides and polypeptides corresponding to the gene of interest may also be useful for the treatment and diagnosis of hematopoietic related disorders such as, for example, anemia, pancytopenia, leukopenia, thrombocytopenia or leukemia since stromal cells are important in the production of cells of hematopoietic lineages. The uses include bone marrow cell ex-vivo culture, bone marrow transplantation, bone marrow reconstitution, radiotherapy or chemotherapy of neoplasia.

***Example 44: Human Dermal Fibroblast and Aortic Smooth Muscle Cell Proliferation.***

The polypeptide of interest is added to cultures of normal human dermal fibroblasts (NHDF) and human aortic smooth muscle cells (AoSMC) and two co-assays are performed with each sample. The first assay examines the effect of the polypeptide of interest on the proliferation of normal human dermal fibroblasts (NHDF) or aortic smooth muscle cells (AoSMC). Aberrant growth of fibroblasts or smooth muscle cells is a part of several pathological processes, including fibrosis, and restenosis. The second assay examines IL6 production by both NHDF and SMC. IL6 production is an indication of functional activation. Activated cells will have increased production of a number of cytokines and other factors, which can result in a proinflammatory or immunomodulatory outcome. Assays are run with and without co-TNF $\alpha$  stimulation, in order to check for costimulatory or inhibitory activity.

Briefly, on day 1, 96-well black plates are set up with 1000 cells/well (NHDF) or 2000 cells/well (AoSMC) in 100  $\mu$ l culture media. NHDF culture media contains: Clonetics FB basal media, 1mg/ml hFGF, 5mg/ml insulin, 50mg/ml gentamycin, 2%FBS, while AoSMC culture media contains Clonetics SM basal media, 0.5  $\mu$ g/ml hEGF, 5mg/ml insulin, 1 $\mu$ g/ml hFGF, 50mg/ml gentamycin, 50  $\mu$ g/ml Amphotericin B, 5%FBS. After incubation at 37°C for at least 4-5 hours, culture media is aspirated and replaced with growth arrest media. Growth arrest media for NHDF contains fibroblast basal media, 50mg/ml gentamycin, 2%

FBS, while growth arrest media for AoSMC contains SM basal media, 50mg/ml gentamycin, 50µg/ml Amphotericin B, 0.4% FBS. Incubate at 37°C until day 2.

On day 2, serial dilutions and templates of the polypeptide of interest are designed such that they always include media controls and known-protein controls. For both  
5 stimulation and inhibition experiments, proteins are diluted in growth arrest media. For inhibition experiments, TNFa is added to a final concentration of 2ng/ml (NHDF) or 5ng/ml (AoSMC). Add 1/3 vol media containing controls or polypeptides of the present invention and incubate at 37°C/5% CO<sub>2</sub> until day 5.

Transfer 60µl from each well to another labeled 96-well plate, cover with a plate-  
10 sealer, and store at 4°C until Day 6 (for IL6 ELISA). To the remaining 100 µl in the cell culture plate, aseptically add Alamar Blue in an amount equal to 10% of the culture volume (10µl). Return plates to incubator for 3 to 4 hours. Then measure fluorescence with excitation at 530nm and emission at 590nm using the CytoFluor. This yields the growth stimulation/inhibition data.

15 On day 5, the IL6 ELISA is performed by coating a 96 well plate with 50-100 ul/well of Anti-Human IL6 Monoclonal antibody diluted in PBS, pH 7.4, incubate ON at room temperature.

On day 6, empty the plates into the sink and blot on paper towels. Prepare Assay  
Buffer containing PBS with 4% BSA. Block the plates with 200 µl/well of Pierce Super  
20 Block blocking buffer in PBS for 1-2 hr and then wash plates with wash buffer (PBS, 0.05% Tween-20). Blot plates on paper towels. Then add 50 µl/well of diluted Anti-Human IL-6 Monoclonal, Biotin-labeled antibody at 0.50 mg/ml. Make dilutions of IL-6 stock in media (30, 10, 3, 1, 0.3, 0 ng/ml). Add duplicate samples to top row of plate. Cover the plates and incubate for 2 hours at RT on shaker. Plates are washed with wash buffer and blotted on  
25 paper towels. Dilute EU-labeled Streptavidin 1:1000 in Assay buffer, and add 100 µl/well. Cover the plate and incubate 1 h at RT. Plates are again washed with wash buffer and blotted on paper towels. Add 100 µl/well of Enhancement Solution and shake for 5 minutes. Read the plate on the Wallac DELFIA Fluorometer. Readings from triplicate samples in each assay are tabulated and averaged.

30 A positive result in this assay suggests AoSMC cell proliferation and that the polypeptide of the present invention may be involved in dermal fibroblast proliferation and/or smooth muscle cell proliferation. A positive result also suggests many potential uses of



polypeptides, polynucleotides, agonists and/or antagonists of the polynucleotide/polypeptide of the present invention which gives a positive result. For example, inflammation and immune responses, wound healing, and angiogenesis, as detailed throughout this specification. Particularly, polypeptides of the present invention and polynucleotides of the present invention may be used in wound healing and dermal regeneration, as well as the promotion of vasculogenesis, both of the blood vessels and lymphatics. The growth of vessels can be used in the treatment of, for example, cardiovascular diseases. Additionally, antagonists of polypeptides and polynucleotides of the invention may be useful in treating diseases, disorders, and/or conditions which involve angiogenesis by acting as an anti-vascular (e.g., anti-angiogenesis). These diseases, disorders, and/or conditions are known in the art and/or are described herein, such as, for example, malignancies, solid tumors, benign tumors, for example hemangiomas, acoustic neuromas, neurofibromas, trachomas, and pyogenic granulomas; arteriosclerotic plaques; ocular angiogenic diseases, for example, diabetic retinopathy, retinopathy of prematurity, macular degeneration, corneal graft rejection, neovascular glaucoma, retrolental fibroplasia, rubeosis, retinoblastoma, uveitis and Pterygia (abnormal blood vessel growth) of the eye; rheumatoid arthritis; psoriasis; delayed wound healing; endometriosis; vasculogenesis; granulations; hypertrophic scars (keloids); nonunion fractures; scleroderma; trachoma; vascular adhesions; myocardial angiogenesis; coronary collaterals; cerebral collaterals; arteriovenous malformations; ischemic limb angiogenesis; Osler-Webber Syndrome; plaque neovascularization; telangiectasia; hemophiliac joints; angiofibroma; fibromuscular dysplasia; wound granulation; Crohn's disease; and atherosclerosis. Moreover, antagonists of polypeptides and polynucleotides of the invention may be useful in treating anti-hyperproliferative diseases and/or anti-inflammatory known in the art and/or described herein.

One skilled in the art could easily modify the exemplified studies to test the activity of polynucleotides (e.g., gene therapy), antibodies, agonists, and/or antagonists and fragments and variants thereof.

#### ***Example 45: Cellular Adhesion Molecule (CAM) Expression on Endothelial Cells.***

The recruitment of lymphocytes to areas of inflammation and angiogenesis involves specific receptor-ligand interactions between cell surface adhesion molecules (CAMs) on lymphocytes and the vascular endothelium. The adhesion process, in both normal and pathological settings, follows a multi-step cascade that involves intercellular adhesion molecule-1 (ICAM-1), vascular cell adhesion molecule-1 (VCAM-1), and endothelial leukocyte adhesion molecule-1 (E-selectin) expression on endothelial cells (EC). The expression of these molecules and others on the vascular endothelium determines the efficiency with which leukocytes may adhere to the local vasculature and extravasate into the local tissue during the development of an inflammatory response. The local concentration of cytokines and growth factor participate in the modulation of the expression of these CAMs.

Briefly, endothelial cells (e.g., Human Umbilical Vein Endothelial cells (HUVECs)) are grown in a standard 96 well plate to confluence, growth medium is removed from the cells and replaced with 100  $\mu$ l of 199 Medium (10% fetal bovine serum (FBS)). Samples for testing and positive or negative controls are added to the plate in triplicate (in 10  $\mu$ l volumes). Plates are then incubated at 37°C for either 5 h (selectin and integrin expression) or 24 h (integrin expression only). Plates are aspirated to remove medium and 100  $\mu$ l of 0.1% paraformaldehyde-PBS(with Ca<sup>++</sup> and Mg<sup>++</sup>) is added to each well. Plates are held at 4°C for 30 min. Fixative is removed from the wells and wells are washed 1X with PBS(+Ca,Mg) + 0.5% BSA and drained. 10  $\mu$ l of diluted primary antibody is added to the test and control wells. Anti-ICAM-1-Biotin, Anti-VCAM-1-Biotin and Anti-E-selectin-Biotin are used at a concentration of 10  $\mu$ g/ml (1:10 dilution of 0.1 mg/ml stock antibody). Cells are incubated at 37°C for 30 min. in a humidified environment. Wells are washed three times with PBS(+Ca,Mg) + 0.5% BSA. 20  $\mu$ l of diluted ExtrAvidin-Alkaline Phosphatase (1:5,000 dilution, referred to herein as the working dilution) are added to each well and incubated at 37°C for 30 min. Wells are washed three times with PBS(+Ca,Mg)+0.5% BSA. Dissolve 1 tablet of p-Nitrophenol Phosphate pNPP per 5 ml of glycine buffer (pH 10.4). 100  $\mu$ l of pNPP substrate in glycine buffer is added to each test well. Standard wells in triplicate are prepared from the working dilution of the ExtrAvidin-Alkaline Phosphatase in glycine buffer: 1:5,000 ( $10^0$ ) >  $10^{-0.5}$  >  $10^{-1}$  >  $10^{-1.5}$ . 5  $\mu$ l of each dilution is added to triplicate wells and the resulting AP content in each well is 5.50 ng, 1.74 ng, 0.55 ng, 0.18 ng. 100  $\mu$ l of pNPP reagent is then added to each of the standard wells. The plate is incubated at 37°C for 4h. A volume of 50  $\mu$ l of 3M NaOH is added to all wells. The plate is read on a plate reader

at 405 nm using the background subtraction option on blank wells filled with glycine buffer only. Additionally, the template is set up to indicate the concentration of AP-conjugate in each standard well [ 5.50 ng; 1.74 ng; 0.55 ng; 0.18 ng]. Results are indicated as amount of bound AP-conjugate in each sample.

5

***Example 46: Alamar Blue Endothelial Cells Proliferation Assay.***

This assay may be used to quantitatively determine protein mediated inhibition of bFGF-induced proliferation of Bovine Lymphatic Endothelial Cells (LECs), Bovine Aortic Endothelial Cells (BAECs) or Human Microvascular Uterine Myometrial Cells (UTMECs). This assay incorporates a fluorometric growth indicator based on detection of metabolic activity. A standard Alamar Blue Proliferation Assay is prepared in EGM-2MV with 10 ng/ml of bFGF added as a source of endothelial cell stimulation. This assay may be used with a variety of endothelial cells with slight changes in growth medium and cell concentration. Dilutions of the protein batches to be tested are diluted as appropriate. Serum-free medium (GIBCO SFM) without bFGF is used as a non-stimulated control and Angiostatin or TSP-1 are included as a known inhibitory controls.

Briefly, LEC, BAECs or UTMECs are seeded in growth media at a density of 5000 to 2000 cells/well in a 96 well plate and placed at 37-C overnight. After the overnight incubation of the cells, the growth media is removed and replaced with GIBCO EC-SFM. The cells are treated with the appropriate dilutions of the protein of interest or control protein sample(s) (prepared in SFM ) in triplicate wells with additional bFGF to a concentration of 10 ng/ ml. Once the cells have been treated with the samples, the plate(s) is/are placed back in the 37° C incubator for three days. After three days 10 ml of stock alamar blue (Biosource Cat# DAL1100) is added to each well and the plate(s) is/are placed back in the 37°C incubator for four hours. The plate(s) are then read at 530nm excitation and 590nm emission using the CytoFluor fluorescence reader. Direct output is recorded in relative fluorescence units.

Alamar blue is an oxidation-reduction indicator that both fluoresces and changes color in response to chemical reduction of growth medium resulting from cell growth. As cells grow in culture, innate metabolic activity results in a chemical reduction of the immediate surrounding environment. Reduction related to growth causes the indicator to change from

oxidized (non-fluorescent blue) form to reduced (fluorescent red) form. i.e. stimulated proliferation will produce a stronger signal and inhibited proliferation will produce a weaker signal and the total signal is proportional to the total number of cells as well as their metabolic activity. The background level of activity is observed with the starvation medium alone. This is compared to the output observed from the positive control samples (bFGF in growth medium) and protein dilutions.

***Example 47: Detection of Inhibition of a Mixed Lymphocyte Reaction.***

This assay can be used to detect and evaluate inhibition of a Mixed Lymphocyte Reaction (MLR) by gene products (e.g., isolated polypeptides). Inhibition of a MLR may be due to a direct effect on cell proliferation and viability, modulation of costimulatory molecules on interacting cells, modulation of adhesiveness between lymphocytes and accessory cells, or modulation of cytokine production by accessory cells. Multiple cells may be targeted by these polypeptides since the peripheral blood mononuclear fraction used in this assay includes T, B and natural killer lymphocytes, as well as monocytes and dendritic cells.

Polypeptides of interest found to inhibit the MLR may find application in diseases associated with lymphocyte and monocyte activation or proliferation. These include, but are not limited to, diseases such as asthma, arthritis, diabetes, inflammatory skin conditions, psoriasis, eczema, systemic lupus erythematosus, multiple sclerosis, glomerulonephritis, inflammatory bowel disease, crohn's disease, ulcerative colitis, arteriosclerosis, cirrhosis, graft vs. host disease, host vs. graft disease, hepatitis, leukemia and lymphoma.

Briefly, PBMCs from human donors are purified by density gradient centrifugation using Lymphocyte Separation Medium (LSM<sup>®</sup>, density 1.0770 g/ml, Organon Teknika Corporation, West Chester, PA). PBMCs from two donors are adjusted to  $2 \times 10^6$  cells/ml in RPMI-1640 (Life Technologies, Grand Island, NY) supplemented with 10% FCS and 2 mM glutamine. PBMCs from a third donor is adjusted to  $2 \times 10^5$  cells/ml. Fifty microliters of PBMCs from each donor is added to wells of a 96-well round bottom microtiter plate. Dilutions of test materials (50  $\mu$ l) is added in triplicate to microtiter wells. Test samples (of the protein of interest) are added for final dilution of 1:4; rhuIL-2 (R&D Systems, Minneapolis, MN, catalog number 202-IL) is added to a final concentration of 1  $\mu$ g/ml; anti-CD4 mAb (R&D Systems, clone 34930.11, catalog number MAB379) is added to a final

concentration of 10 µg/ml. Cells are cultured for 7-8 days at 37°C in 5% CO<sub>2</sub>, and 1 µCi of [<sup>3</sup>H] thymidine is added to wells for the last 16 hrs of culture. Cells are harvested and thymidine incorporation determined using a Packard TopCount. Data is expressed as the mean and standard deviation of triplicate determinations.

5        Samples of the protein of interest are screened in separate experiments and compared to the negative control treatment, anti-CD4 mAb, which inhibits proliferation of lymphocytes and the positive control treatment, IL-2 (either as recombinant material or supernatant), which enhances proliferation of lymphocytes.

One skilled in the art could easily modify the exemplified studies to test the activity of  
10 polynucleotides (e.g., gene therapy), antibodies, agonists, and/or antagonists and fragments and variants thereof.

#### ***Example 48: Assays for Protease Activity.***

15        The following assay may be used to assess protease activity of the colon or colon cancer related polypeptides of the invention.

Gelatin and casein zymography are performed essentially as described (Heusen et al., *Anal. Biochem.*, 102:196-202 (1980); Wilson et al., *Journal of Urology*, 149:653-658 (1993)). Samples are run on 10% polyacrylamide/0.1% SDS gels containing 1% gelatin or casein,  
20 soaked in 2.5% triton at room temperature for 1 hour, and in 0.1M glycine, pH 8.3 at 37°C 5 to 16 hours. After staining in amido black areas of proteolysis appear as clear areas against the blue-black background. Trypsin (Sigma T8642) is used as a positive control.

Protease activity is also determined by monitoring the cleavage of n-a-benzoyl-L-arginine ethyl ester (BAEE) (Sigma B-4500. Reactions are set up in (25mM NaPO<sub>4</sub>, 1mM  
25 EDTA, and 1mM BAEE), pH 7.5. Samples are added and the change in absorbance at 260nm is monitored on the Beckman DU-6 spectrophotometer in the time-drive mode. Trypsin is used as a positive control

Additional assays based upon the release of acid-soluble peptides from casein or hemoglobin measured as absorbance at 280 nm or colorimetrically using the Folin method  
30 are performed as described in Bergmeyer, et al., *Methods of Enzymatic Analysis*, 5 (1984). Other assays involve the solubilization of chromogenic substrates (Ward, *Applied Science*, 251-317 (1983).

***Example 49: Identifying Serine Protease Substrate Specificity.***

Methods known in the art or described herein may be used to determine the substrate specificity of the polypeptides of the present invention having serine protease activity. A preferred method of determining substrate specificity is by the use of positional scanning synthetic combinatorial libraries as described in GB 2 324 529 (incorporated herein in its entirety).

***Example 50: Ligand Binding Assays.***

The following assay may be used to assess ligand binding activity of the colon or colon cancer related polypeptides of the invention.

Ligand binding assays provide a direct method for ascertaining receptor pharmacology and are adaptable to a high throughput format. The purified ligand for a colon or colon cancer related polypeptide is radiolabeled to high specific activity (50-2000 Ci/mmol) for binding studies. A determination is then made that the process of radiolabeling does not diminish the activity of the ligand towards its colon or colon cancer related polypeptide. Assay conditions for buffers, ions, pH and other modulators such as nucleotides are optimized to establish a workable signal to noise ratio for both membrane and whole cell colon or colon cancer related polypeptide sources. For these assays, specific colon or colon cancer related polypeptide binding is defined as total associated radioactivity minus the radioactivity measured in the presence of an excess of unlabeled competing ligand. Where possible, more than one competing ligand is used to define residual nonspecific binding.

***Example 51: Functional Assay in Xenopus Oocytes.***

Capped RNA transcripts from linearized plasmid templates encoding the colon or colon cancer related antigen cDNAs of the invention are synthesized in vitro with RNA polymerases in accordance with standard procedures. In vitro transcripts are suspended in water at a final concentration of 0.2 mg/ml. Ovarian lobes are removed from adult female toads, Stage V defolliculated oocytes are obtained, and RNA transcripts (10 ng/oocyte) are

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injected in a 50 nl bolus using a microinjection apparatus. Two electrode voltage clamps are used to measure the currents from individual *Xenopus oocytes* in response to colon cancer antigen or colon cancer antigen agonist exposure. Recordings are made in Ca<sup>2+</sup> free Barth's medium at room temperature. The *Xenopus* system can be used to screen  
5 known ligands and tissue/cell extracts for activating ligands.

### ***Example 52: Microphysiometric Assays.***

Activation of a wide variety of secondary messenger systems results in extrusion of  
10 small amounts of acid from a cell. The acid formed is largely as a result of the increased metabolic activity required to fuel the intracellular signaling process. The pH changes in the media surrounding the cell are very small but are detectable by the CYTOSENSOR microphysiometer (Molecular Devices Ltd., Menlo Park, Calif.). The CYTOSENSOR is thus capable of detecting the activation of a colon cancer antigen which is coupled to an energy  
15 utilizing intracellular signaling pathway.

### ***Example 53: Extract/Cell Supernatant Screening.***

A large number of mammalian receptors exist for which there remains, as yet, no  
20 cognate activating ligand (agonist). Thus, active ligands for these receptors may not be included within the ligands banks as identified to date. Accordingly, the colon cancer antigen of the invention can also be functionally screened (using calcium, cAMP, microphysiometer, oocyte electrophysiology, etc., functional screens) against tissue extracts to identify its natural ligands. Extracts that produce positive functional responses can be sequentially  
25 subfractionated until an activating ligand is isolated identified.

### ***Example 54: Calcium and cAMP Functional Assays.***

Seven transmembrane receptors which are expressed in HEK 293 cells have been  
30 shown to be coupled functionally to activation of PLC and calcium mobilization and/or cAMP stimulation or inhibition. Basal calcium levels in the HEK 293 cells in receptor-transfected or vector control cells were observed to be in the normal, 100 nM to 200 nM,

range. HEK 293 cells expressing recombinant receptors are loaded with fura 2 and in a single day >150 selected ligands or tissue/cell extracts are evaluated for agonist induced calcium mobilization. Similarly, HEK 293 cells expressing recombinant receptors are evaluated for the stimulation or inhibition of cAMP production using standard cAMP  
5 quantitation assays. Agonists presenting a calcium transient or cAMP fluctuation are tested in vector control cells to determine if the response is unique to the transfected cells expressing receptor.

***Example 55: ATP-binding assay.***

10

The following assay may be used to assess ATP-binding activity of the colon or colon cancer related polypeptides of the invention.

ATP-binding activity of the colon or colon cancer related polypeptides of the invention may be detected using the ATP-binding assay described in U.S. Patent 5, 858, 719,  
15 which is herein incorporated by reference in its entirety. Briefly, ATP-binding to colon or colon cancer related polypeptides of the invention is measured via photoaffinity labeling with 8-azido-ATP in a competition assay. Reaction mixtures containing 1 mg/ml of the ABC transport protein of the present invention are incubated with varying concentrations of ATP, or the non-hydrolyzable ATP analog adenylyl-5'-imidodiphosphate for 10 minutes at 4°C. A  
20 mixture of 8-azido-ATP (Sigma Chem. Corp., St. Louis, MO.) plus 8-azido-ATP (  $-^{32}\text{P}$ -ATP) (5 mCi/ $\mu\text{mol}$ , ICN, Irvine CA.) is added to a final concentration of 100  $\mu\text{M}$  and 0.5 ml aliquots are placed in the wells of a porcelain spot plate on ice. The plate is irradiated using a short wave 254 nm UV lamp at a distance of 2.5 cm from the plate for two one-minute intervals with a one-minute cooling interval in between. The reaction is stopped by addition  
25 of dithiothreitol to a final concentration of 2mM. The incubations are subjected to SDS-PAGE electrophoresis, dried, and autoradiographed. Protein bands corresponding to the particular colon or colon cancer related polypeptides of the invention are excised, and the radioactivity quantified. A decrease in radioactivity with increasing ATP or adenylyl-5'-imidodiphosphate provides a measure of ATP affinity to the colon or colon cancer related  
30 polypeptides.



**Example 56: Small Molecule****Screening.**

This invention is particularly useful for screening therapeutic compounds by using the colon or colon cancer related polypeptides of the invention, or binding fragments thereof, in any of a variety of drug screening techniques. The polypeptide or fragment employed in such a test may be affixed to a solid support, expressed on a cell surface, free in solution, or located intracellularly. One method of drug screening utilizes eukaryotic or prokaryotic host cells which are stably transformed with recombinant nucleic acids expressing the polypeptide or fragment. Drugs are screened against such transformed cells in competitive binding assays. One may measure, for example, the formulation of complexes between the agent being tested and a colon or colon cancer related polypeptide of the invention.

Thus, the present invention provides methods of screening for drugs or any other agents which affect activities mediated by the colon or colon cancer related polypeptides of the invention. These methods comprise contacting such an agent with a colon or colon cancer related polypeptide of the invention or a fragment thereof and assaying for the presence of a complex between the agent and the colon or colon cancer related polypeptides or a fragment thereof, by methods well known in the art. In such a competitive binding assay, the agents to screen are typically labeled. Following incubation, free agent is separated from that present in bound form, and the amount of free or uncomplexed label is a measure of the ability of a particular agent to bind to the colon or colon cancer related polypeptides of the invention.

Another technique for drug screening provides high throughput screening for compounds having suitable binding affinity to the colon or colon cancer related polypeptides of the invention, and is described in great detail in European Patent Application 84/03564, published on September 13, 1984, which is herein incorporated by reference in its entirety. Briefly stated, large numbers of different small molecule test compounds are synthesized on a solid substrate, such as plastic pins or some other surface. The test compounds are reacted with colon or colon cancer related polypeptides of the invention and washed. Bound colon or colon cancer related polypeptides are then detected by methods well known in the art. Purified colon or colon cancer related polypeptides are coated directly onto plates for use in the aforementioned drug screening techniques. In addition, non-neutralizing antibodies may be used to capture the peptide and immobilize it on the solid support.

This invention also contemplates the use of competitive drug screening assays in which neutralizing antibodies capable of binding colon or colon cancer related polypeptides of the invention specifically compete with a test compound for binding to the colon or colon cancer related polypeptides or fragments thereof. In this manner, the antibodies are used to  
5 detect the presence of any peptide which shares one or more antigenic epitopes with a colon or colon cancer related polypeptides.

***Example 57: Phosphorylation Assay.***

10 In order to assay for phosphorylation activity of the colon or colon cancer related polypeptides of the invention, a phosphorylation assay as described in U.S. Patent 5,958,405 (which is herein incorporated by reference) is utilized. Briefly, phosphorylation activity may be measured by phosphorylation of a protein substrate using gamma-labeled  $^{32}\text{P}$ -ATP and quantitation of the incorporated radioactivity using a gamma radioisotope counter. The colon  
15 or colon cancer related polypeptides of the invention are incubated with the protein substrate,  $^{32}\text{P}$ -ATP, and a kinase buffer. The  $^{32}\text{P}$  incorporated into the substrate is then separated from free  $^{32}\text{P}$ -ATP by electrophoresis, and the incorporated  $^{32}\text{P}$  is counted and compared to a negative control. Radioactivity counts above the negative control are indicative of phosphorylation activity of the colon or colon cancer related polypeptides of the invention.

20

***Example 58: Detection of Phosphorylation Activity (Activation) of Colon or Colon Cancer Related Polypeptides of the Invention in the Presence of Colon or Colon Cancer Related Polypeptides Ligands.***

25 Methods known in the art or described herein may be used to determine the phosphorylation activity of the colon or colon cancer related polypeptides of the invention. A preferred method of determining phosphorylation activity is by the use of the tyrosine phosphorylation assay as described in US 5,817,471 (incorporated herein by reference).

30 ***Example 59: Identification Of Signal Transduction Proteins That Interact With Colon or Colon Cancer Related Polypeptides Of The Present Invention.***

The inventive purified colon or colon cancer related polypeptides of the invention are research tools for the identification, characterization and purification of additional signal transduction pathway proteins or receptor proteins. Briefly, labeled receptor PTK polypeptide is useful as a reagent for the purification of molecules with which it interacts. In one embodiment of affinity purification, receptor PTK polypeptide is covalently coupled to a chromatography column. Cell-free extract derived from putative target cells, such as carcinoma tissues, is passed over the column, and molecules with appropriate affinity bind to the receptor PTK polypeptides, or specific phosphotyrosine-recognition domains thereof. The receptor PTK polypeptide interacting protein-complex is recovered from the column, dissociated, and the recovered molecule subjected to N-terminal protein sequencing. This amino acid sequence is then used to identify the captured molecule or to design degenerate oligonucleotide probes for cloning the relevant gene from an appropriate cDNA library.

#### ***Example 60: IL-6 Bioassay.***

To test the proliferative effects of the colon or colon cancer related polypeptides of the invention, the IL-6 Bioassay as described by Marz *et al.* is utilized (*Proc. Natl. Acad. Sci., U.S.A.*, 95:3251-56 (1998), which is herein incorporated by reference). Briefly, IL-6 dependent B9 murine cells are washed three times in IL-6 free medium and plated at a concentration of 5,000 cells per well in 50  $\mu$ l, and 50  $\mu$ l of the IL-6-like polypeptide is added. After 68 hrs. at 37°C, the number of viable cells is measured by adding the tetrazolium salt thiazolyl blue (MTT) and incubating for a further 4 hrs. at 37°C. B9 cells are lysed by SDS and optical density is measured at 570 nm. Controls containing IL-6 (positive) and no cytokine (negative) are utilized. Enhanced proliferation in the test sample(s) relative to the negative control is indicative of proliferative effects mediated by colon or colon cancer related polypeptides of the invention.

#### ***Example 61: Support of Chicken Embryo Neuron Survival.***

To test whether sympathetic neuronal cell viability is supported by the colon or colon cancer related polypeptides of the invention, the chicken embryo neuronal survival assay of Senaldi *et al* is utilized (*Proc. Natl. Acad. Sci., U.S.A.*, 96:11458-63 (1998), which is herein

incorporated by reference). Briefly, motor and sympathetic neurons are isolated from chicken embryos, resuspended in L15 medium (with 10% FCS, glucose, sodium selenite, progesterone, conalbumin, putrescine, and insulin; Life Technologies, Rockville, MD.) and Dulbecco's modified Eagles medium [with 10% FCS, glutamine, penicillin, and 25 mM  
5 Hepes buffer (pH 7.2); Life Technologies, Rockville, MD.], respectively, and incubated at 37°C in 5% CO<sub>2</sub> in the presence of different concentrations of the inventive purified IL-6-like polypeptide, as well as a negative control lacking any cytokine. After 3 days, neuron survival is determined by evaluation of cellular morphology, and through the use of the colorimetric assay of Mosmann (Mossmann, T., *J. Immunol. Methods*, 65:55-63 (1983)). Enhanced  
10 neuronal cell viability as compared to the controls lacking cytokine is indicative of the ability of the inventive purified IL-6-like polypeptide(s) to enhance the survival of neuronal cells.

#### ***Example 62: Assay for Phosphatase Activity.***

15 The following assay may be used to assess serine/threonine phosphatase (PTPase) activity of the colon or colon cancer related polypeptides of the invention.

In order to assay for serine/threonine phosphatase (PTPase) activity, assays can be utilized which are widely known to those skilled in the art. For example, the serine/threonine phosphatase (PSPase) activity is measured using a PSPase assay kit from New England  
20 Biolabs, Inc. Myelin basic protein (MyBP), a substrate for PSPase, is phosphorylated on serine and threonine residues with cAMP-dependent Protein Kinase in the presence of [ $\gamma$ -<sup>32</sup>P]ATP. Protein serine/threonine phosphatase activity is then determined by measuring the release of inorganic phosphate from <sup>32</sup>P-labeled MyBP.

#### ***Example 63: Interaction of Serine/Threonine Phosphatases with other Proteins.***

The colon or colon cancer related polypeptides of the invention with serine/threonine phosphatase activity as determined in Example 62 are research tools for the identification,  
30 characterization and purification of additional interacting proteins or receptor proteins, or other signal transduction pathway proteins. Briefly, a labeled colon or colon cancer related polypeptides of the invention is useful as a reagent for the purification of molecules with

which it interacts. In one embodiment of affinity purification, colon or colon cancer related polypeptides of the invention is covalently coupled to a chromatography column. Cell-free extract derived from putative target cells, such as neural or liver cells, is passed over the column, and molecules with appropriate affinity bind to the colon or colon cancer related polypeptides of the invention. The colon or colon cancer related polypeptides of the invention-complex is recovered from the column, dissociated, and the recovered molecule subjected to N-terminal protein sequencing. This amino acid sequence is then used to identify the captured molecule or to design degenerate oligonucleotide probes for cloning the relevant gene from an appropriate cDNA library.

#### ***Example 64: Assaying for Heparanase Activity.***

In order to assay for heparanase activity of the colon or colon cancer related polypeptides of the invention, the heparanase assay described by Vlodavsky et al is utilized (Vlodavsky, I., et al., Nat. Med., 5:793-802 (1999)). Briefly, cell lysates, conditioned media or intact cells ( $1 \times 10^6$  cells per 35-mm dish) are incubated for 18 hrs at 37°C, pH 6.2-6.6, with  $^{35}\text{S}$ -labeled ECM or soluble ECM derived peak I proteoglycans. The incubation medium is centrifuged and the supernatant is analyzed by gel filtration on a Sepharose CL-6B column (0.9 x 30 cm). Fractions are eluted with PBS and their radioactivity is measured. Degradation fragments of heparan sulfate side chains are eluted from Sepharose 6B at  $0.5 < K_{av} < 0.8$  (peak II). Each experiment is done at least three times. Degradation fragments corresponding to "peak II," as described by Vlodavsky et al., is indicative of the activity of the colon or colon cancer related polypeptides of the invention in cleaving heparan sulfate.

#### ***Example 65: Immobilization of biomolecules.***

This method provides a method for the stabilization of colon or colon cancer related polypeptides of the invention in non-host cell lipid bilayer constructs (see, e.g., Bieri et al., Nature Biotech 17:1105-1108 (1999), hereby incorporated by reference in its entirety herein) which can be adapted for the study of colon or colon cancer related polypeptides of the invention in the various functional assays described above. Briefly, carbohydrate-specific chemistry for biotinylation is used to confine a biotin tag to the extracellular domain of the

colon or colon cancer related polypeptides of the invention, thus allowing uniform orientation upon immobilization. A 50uM solution of colon or colon cancer related polypeptides of the invention in washed membranes is incubated with 20 mM NaIO<sub>4</sub> and 1.5 mg/ml (4mM) BACH or 2 mg/ml (7.5mM) biotin-hydrazide for 1 hr at room temperature (reaction volume, 150ul). Then the sample is dialyzed (Pierce Slidealizer Cassett, 10 kDa cutoff; Pierce Chemical Co., Rockford IL) at 4C first for 5 h, exchanging the buffer after each hour, and finally for 12 h against 500 ml buffer R (0.15 M NaCl, 1 mM MgCl<sub>2</sub>, 10 mM sodium phosphate, pH7). Just before addition into a cuvette, the sample is diluted 1:5 in buffer ROG50 (Buffer R supplemented with 50 mM octylglucoside).

It will be clear that the invention may be practiced otherwise than as particularly described in the foregoing description and examples. Numerous modifications and variations of the present invention are possible in light of the above teachings and, therefore, are within the scope of the appended claims.

The entire disclosure of each document cited (including patents, patent applications, journal articles, abstracts, laboratory manuals, books, or other disclosures) in the Background of the Invention, Detailed Description, and Examples is hereby incorporated herein by reference. Further, the hard copy of the sequence listing submitted herewith and the corresponding computer readable form are both incorporated herein by reference in their entireties. Moreover, the hard copy of and the corresponding computer readable form of the Sequence Listing of U.S. Patent Application Serial No. 60/157,137 and 60/163,280 are also incorporated herein by reference in its entirety.

Applicant's or agent's file reference number	PA005PCT	International application No.	UNASSIGNED
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## INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13 bis)

<b>A.</b> The indications made below relate to the microorganism referred to in the description on page <u>311</u> , line <u>N/A</u>	
<b>B. IDENTIFICATION OF DEPOSIT</b> Further deposits are identified on an additional sheet <input checked="" type="checkbox"/>	
Name of depositary institution American Type Culture Collection	
Address of depositary institution (including postal code and country) 10801 University Boulevard Manassas, Virginia 20110-2209 United States of America	
Date of deposit 20 May 1997	Accession Number 209059
<b>C. ADDITIONAL INDICATIONS</b> (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
<b>D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE</b> (if the indications are not for all designated States) Europe In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC). Continued on the Attached Pages 2 & 3	
<b>E. SEPARATE FURNISHING OF INDICATIONS</b> (leave blank if not applicable) The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")	

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Page 2

**CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

**NORWAY**

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**AUSTRALIA**

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**FINLAND**

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**UNITED KINGDOM**

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ATCC Deposit No. 209059

Page 3

**DENMARK**

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**NETHERLANDS**

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Applicant's or agent's file reference number	PA005PCT	International application No.	UNASSIGNED
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(PCT Rule 13 bis)

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<b>B. IDENTIFICATION OF DEPOSIT</b> Further deposits are identified on an additional sheet <input checked="" type="checkbox"/>	
Name of depositary institution American Type Culture Collection	
Address of depositary institution (including postal code and country) 10801 University Boulevard Manassas, Virginia 20110-2209 United States of America	
Date of deposit 20 May 1997	Accession Number 209060
<b>C. ADDITIONAL INDICATIONS</b> (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
<b>D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE</b> (if the indications are not for all designated States)	
Europe In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC). Continued on the Attached Pages 2 & 3	
<b>E. SEPARATE FURNISHING OF INDICATIONS</b> (leave blank if not applicable)	
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ATCC Deposit No. 209060

Page 2

**CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

**NORWAY**

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**FINLAND**

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**UNITED KINGDOM**

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ATCC Deposit No. 209060

Page 3

**DENMARK**

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**NETHERLANDS**

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Applicant's or agent's file reference number	PA005PCT	International application No.	UNASSIGNED
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## INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

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<b>B. IDENTIFICATION OF DEPOSIT</b> Further deposits are identified on an additional sheet <input checked="" type="checkbox"/>	
Name of depositary institution <u>American Type Culture Collection</u>	
Address of depositary institution (including postal code and country) <u>10801 University Boulevard</u> <u>Manassas, Virginia 20110-2209</u> <u>United States of America</u>	
Date of deposit <u>20 May 1997</u>	Accession Number <u>209061</u>
<b>C. ADDITIONAL INDICATIONS</b> (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
<b>D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE</b> (if the indications are not for all designated States)	
<u>Europe</u> In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC). Continued on the Attached Pages 2 & 3	
<b>E. SEPARATE FURNISHING OF INDICATIONS</b> (leave blank if not applicable)	
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**ATCC Deposit No. 209061****Page 2****CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

**NORWAY**

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**FINLAND**

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**UNITED KINGDOM**

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ATCC Deposit No. 209061

Page 3

**DENMARK**

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**NETHERLANDS**

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Applicant's or agent's file reference number	PA005PCT	International application No.	UNASSIGNED
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## INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13 bis)

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<b>B. IDENTIFICATION OF DEPOSIT</b> Further deposits are identified on an additional sheet <input checked="" type="checkbox"/>	
Name of depositary institution American Type Culture Collection	
Address of depositary institution (including postal code and country) 10801 University Boulevard Manassas, Virginia 20110-2209 United States of America	
Date of deposit 20 May 1997	Accession Number 209062
<b>C. ADDITIONAL INDICATIONS</b> (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
<b>D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE</b> (if the indications are not for all designated States) Europe In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC). Continued on the Attached Pages 2 & 3	
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**ATCC Deposit No. 209062****Page 2****CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

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**AUSTRALIA**

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**FINLAND**

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**UNITED KINGDOM**

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ATCC Deposit No. 209062

Page 3

**DENMARK**

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**SWEDEN**

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**NETHERLANDS**

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Applicant's or agent's file reference number	PA005PCT	International application No.	UNASSIGNED
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## INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13 bis)

<b>A.</b> The indications made below relate to the microorganism referred to in the description on page <u>311</u> , line <u>N/A</u>	
<b>B. IDENTIFICATION OF DEPOSIT</b> Further deposits are identified on an additional sheet <input checked="" type="checkbox"/>	
Name of depositary institution <u>American Type Culture Collection</u>	
Address of depositary institution (including postal code and country) <u>10801 University Boulevard</u> <u>Manassas, Virginia 20110-2209</u> <u>United States of America</u>	
Date of deposit <u>20 May 1997</u>	Accession Number <u>209063</u>
<b>C. ADDITIONAL INDICATIONS</b> (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
<b>D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE</b> (if the indications are not for all designated States) <u>Europe</u> In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC). Continued on the Attached Pages 2 & 3	
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**ATCC Deposit No. 209063****Page 2****CANADA**

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ATCC Deposit No. 209063

Page 3

**DENMARK**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

**SWEDEN**

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**NETHERLANDS**

The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.

Applicant's or agent's file reference number	PA005PCT	International application No.	UNASSIGNED
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## INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13 bis)

<b>A.</b> The indications made below relate to the microorganism referred to in the description on page <u>311</u> , line <u>N/A</u>	
<b>B. IDENTIFICATION OF DEPOSIT</b> Further deposits are identified on an additional sheet <input checked="" type="checkbox"/>	
Name of depositary institution <u>American Type Culture Collection</u>	
Address of depositary institution (including postal code and country) <u>10801 University Boulevard</u> <u>Manassas, Virginia 20110-2209</u> <u>United States of America</u>	
Date of deposit  <u>20 May 1997</u>	Accession Number  <u>209064</u>
<b>C. ADDITIONAL INDICATIONS</b> (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
<b>D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE</b> (if the indications are not for all designated States)	
<u>Europe</u> In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC). Continued on the Attached Pages 2 & 3	
<b>E. SEPARATE FURNISHING OF INDICATIONS</b> (leave blank if not applicable)	
The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")	

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**ATCC Deposit No. 209064****Page 2****CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

**NORWAY**

The applicant hereby requests that the application has been laid open to public inspection (by the Norwegian Patent Office), or has been finally decided upon by the Norwegian Patent Office without having been laid open inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Norwegian Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Norwegian Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on the list of recognized experts drawn up by the Norwegian Patent Office or any person approved by the applicant in the individual case.

**AUSTRALIA**

The applicant hereby gives notice that the furnishing of a sample of a microorganism shall only be effected prior to the grant of a patent, or prior to the lapsing, refusal or withdrawal of the application, to a person who is a skilled addressee without an interest in the invention (Regulation 3.25(3) of the Australian Patents Regulations).

**FINLAND**

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

**UNITED KINGDOM**

The applicant hereby requests that the furnishing of a sample of a microorganism shall only be made available to an expert. The request to this effect must be filed by the applicant with the International Bureau before the completion of the technical preparations for the international publication of the application.

**ATCC Deposit No. 209064****Page 3****DENMARK**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

**SWEDEN**

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**NETHERLANDS**

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Applicant's or agent's file reference number	PA005PCT	International application No.	UNASSIGNED
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## INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13bis)

A. The indications made below relate to the microorganism referred to in the description on page <u>311</u> , line <u>N/A</u>	
B. IDENTIFICATION OF DEPOSIT Further deposits are identified on an additional sheet <input checked="" type="checkbox"/>	
Name of depositary institution <u>American Type Culture Collection</u>	
Address of depositary institution (including postal code and country) <u>10801 University Boulevard</u> <u>Manassas, Virginia 20110-2209</u> <u>United States of America</u>	
Date of deposit <u>20 May 1997</u>	Accession Number <u>209065</u>
C. ADDITIONAL INDICATIONS (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE (if the indications are not for all designated States)	
Europe In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC). Continued on the Attached Pages 2 & 3	
E. SEPARATE FURNISHING OF INDICATIONS (leave blank if not applicable)	
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**ATCC Deposit No. 209065****Page 2****CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

**NORWAY**

The applicant hereby requests that the application has been laid open to public inspection (by the Norwegian Patent Office), or has been finally decided upon by the Norwegian Patent Office without having been laid open inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Norwegian Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Norwegian Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on the list of recognized experts drawn up by the Norwegian Patent Office or any person approved by the applicant in the individual case.

**AUSTRALIA**

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**FINLAND**

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

**UNITED KINGDOM**

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ATCC Deposit No. 209065

Page 3

**DENMARK**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

**SWEDEN**

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**NETHERLANDS**

The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.

Applicant's or agent's file reference number	PA005PCT	International application No.	UNASSIGNED
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## INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13 bis)

<b>A.</b> The indications made below relate to the microorganism referred to in the description on page <u>311</u> , line <u>N/A</u>	
<b>B. IDENTIFICATION OF DEPOSIT</b> Further deposits are identified on an additional sheet <input checked="" type="checkbox"/>	
Name of depositary institution <u>American Type Culture Collection</u>	
Address of depositary institution (including postal code and country) <u>10801 University Boulevard</u> <u>Manassas, Virginia 20110-2209</u> <u>United States of America</u>	
Date of deposit <u>20 May 1997</u>	Accession Number <u>209066</u>
<b>C. ADDITIONAL INDICATIONS</b> (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
<b>D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE</b> (if the indications are not for all designated States)	
<u>Europe</u> In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC). Continued on the Attached Pages 2 & 3	
<b>E. SEPARATE FURNISHING OF INDICATIONS</b> (leave blank if not applicable)	
The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")     	

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**ATCC Deposit No. 209066****Page 2****CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

**NORWAY**

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**AUSTRALIA**

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**FINLAND**

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

**UNITED KINGDOM**

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**ATCC Deposit No. 209066****Page 3****DENMARK**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

**SWEDEN**

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**NETHERLANDS**

The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.

Applicant's or agent's file reference number	PA005PCT	International application No.	UNASSIGNED
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## INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13 bis)

A. The indications made below relate to the microorganism referred to in the description on page <u>311</u> , line <u>N/A</u>	
B. IDENTIFICATION OF DEPOSIT Further deposits are identified on an additional sheet <input checked="" type="checkbox"/>	
Name of depositary institution <u>American Type Culture Collection</u>	
Address of depositary institution (including postal code and country) <u>10801 University Boulevard</u> <u>Manassas, Virginia 20110-2209</u> <u>United States of America</u>	
Date of deposit <u>20 May 1997</u>	Accession Number <u>209067</u>
C. ADDITIONAL INDICATIONS (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE (if the indications are not for all designated States) <u>Europe</u> In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC). Continued on the Attached Pages 2 & 3	
E. SEPARATE FURNISHING OF INDICATIONS (leave blank if not applicable) The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")	
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**ATCC Deposit No. 209067****Page 2****CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

**NORWAY**

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**AUSTRALIA**

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**FINLAND**

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**UNITED KINGDOM**

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ATCC Deposit No. 209067

Page 3

**DENMARK**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

**SWEDEN**

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**NETHERLANDS**

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Applicant's or agent's file reference number	PA005PCT	International application No.	UNASSIGNED
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## INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13 bis)

<b>A.</b> The indications made below relate to the microorganism referred to in the description on page <u>311</u> , line <u>N/A</u>	
<b>B. IDENTIFICATION OF DEPOSIT</b> Further deposits are identified on an additional sheet <input checked="" type="checkbox"/>	
Name of depositary institution <u>American Type Culture Collection</u>	
Address of depositary institution (including postal code and country) <u>10801 University Boulevard</u> <u>Manassas, Virginia 20110-2209</u> <u>United States of America</u>	
Date of deposit <u>20 May 1997</u>	Accession Number <u>209068</u>
<b>C. ADDITIONAL INDICATIONS</b> (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
<b>D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE</b> (if the indications are not for all designated States)	
<u>Europe</u> In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC). Continued on the Attached Pages 2 & 3	
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ATCC Deposit No. 209068

Page 2

**CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

**NORWAY**

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**UNITED KINGDOM**

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ATCC Deposit No. 209068

Page 3

**DENMARK**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

**SWEDEN**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Swedish Patent Office), or has been finally decided upon by the Swedish Patent Office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the International Bureau before the expiration of 16 months from the priority date (preferably on the Form PCT/RO/134 reproduced in annex Z of Volume I of the PCT Applicant's Guide). If such a request has been filed by the applicant any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Swedish Patent Office or any person approved by a applicant in the individual case.

**NETHERLANDS**

The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.

Applicant's or agent's file reference number	PA005PCT	International application No.	UNASSIGNED
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## INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13 bis)

<b>A.</b> The indications made below relate to the microorganism referred to in the description on page <u>311</u> , line <u>N/A</u>	
<b>B. IDENTIFICATION OF DEPOSIT</b> Further deposits are identified on an additional sheet <input checked="" type="checkbox"/>	
Name of depositary institution <u>American Type Culture Collection</u>	
Address of depositary institution (including postal code and country) <u>10801 University Boulevard</u> <u>Manassas, Virginia 20110-2209</u> <u>United States of America</u>	
Date of deposit <u>20 May 1997</u>	Accession Number <u>209069</u>
<b>C. ADDITIONAL INDICATIONS</b> (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
<b>D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE</b> (if the indications are not for all designated States)	
<u>Europe</u> In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC). Continued on the Attached Pages 2 & 3	
<b>E. SEPARATE FURNISHING OF INDICATIONS</b> (leave blank if not applicable)	
The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")          	

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<input type="checkbox"/> This sheet was received by the International Bureau on:
Authorized officer

Form PCT/RO/134 (July 1992)

**ATCC Deposit No. 209069****Page 2****CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

**NORWAY**

The applicant hereby requests that the application has been laid open to public inspection (by the Norwegian Patent Office), or has been finally decided upon by the Norwegian Patent Office without having been laid open inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Norwegian Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Norwegian Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on the list of recognized experts drawn up by the Norwegian Patent Office or any person approved by the applicant in the individual case.

**AUSTRALIA**

The applicant hereby gives notice that the furnishing of a sample of a microorganism shall only be effected prior to the grant of a patent, or prior to the lapsing, refusal or withdrawal of the application, to a person who is a skilled addressee without an interest in the invention (Regulation 3.25(3) of the Australian Patents Regulations).

**FINLAND**

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

**UNITED KINGDOM**

The applicant hereby requests that the furnishing of a sample of a microorganism shall only be made available to an expert. The request to this effect must be filed by the applicant with the International Bureau before the completion of the technical preparations for the international publication of the application.

ATCC Deposit No. 209069

Page 3

**DENMARK**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

**SWEDEN**

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**NETHERLANDS**

The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.

Applicant's or agent's file reference number	PA005PCT	International application No.	UNASSIGNED
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## INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13 bis)

<b>A.</b> The indications made below relate to the microorganism referred to in the description on page <u>311</u> , line <u>N/A</u>	
<b>B. IDENTIFICATION OF DEPOSIT</b> Further deposits are identified on an additional sheet <input checked="" type="checkbox"/>	
Name of depositary institution <u>American Type Culture Collection</u>	
Address of depositary institution (including postal code and country) <u>10801 University Boulevard</u> <u>Manassas, Virginia 20110-2209</u> <u>United States of America</u>	
Date of deposit <u>12 January 1998</u>	Accession Number <u>209579</u>
<b>C. ADDITIONAL INDICATIONS</b> (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
<b>D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE</b> (if the indications are not for all designated States)	
<u>Europe</u> In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC). Continued on the Attached Pages 2 & 3	
<b>E. SEPARATE FURNISHING OF INDICATIONS</b> (leave blank if not applicable)	
The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")          	

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**ATCC Deposit No. 209579****Page 2****CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

**NORWAY**

The applicant hereby requests that the application has been laid open to public inspection (by the Norwegian Patent Office), or has been finally decided upon by the Norwegian Patent Office without having been laid open inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Norwegian Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Norwegian Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on the list of recognized experts drawn up by the Norwegian Patent Office or any person approved by the applicant in the individual case.

**AUSTRALIA**

The applicant hereby gives notice that the furnishing of a sample of a microorganism shall only be effected prior to the grant of a patent, or prior to the lapsing, refusal or withdrawal of the application, to a person who is a skilled addressee without an interest in the invention (Regulation 3.25(3) of the Australian Patents Regulations).

**FINLAND**

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

**UNITED KINGDOM**

The applicant hereby requests that the furnishing of a sample of a microorganism shall only be made available to an expert. The request to this effect must be filed by the applicant with the International Bureau before the completion of the technical preparations for the international publication of the application.

ATCC Deposit No. 209579

Page 3

**DENMARK**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

**SWEDEN**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Swedish Patent Office), or has been finally decided upon by the Swedish Patent Office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the International Bureau before the expiration of 16 months from the priority date (preferably on the Form PCT/RO/134 reproduced in annex Z of Volume I of the PCT Applicant's Guide). If such a request has been filed by the applicant any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Swedish Patent Office or any person approved by a applicant in the individual case.

**NETHERLANDS**

The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.

Applicant's or agent's file reference number	PA005PCT	International application No.	UNASSIGNED
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## INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13 bis)

<b>A.</b> The indications made below relate to the microorganism referred to in the description on page <u>311</u> , line <u>N/A</u>	
<b>B. IDENTIFICATION OF DEPOSIT</b> Further deposits are identified on an additional sheet <input checked="" type="checkbox"/>	
Name of depositary institution <u>American Type Culture Collection</u>	
Address of depositary institution (including postal code and country) <u>10801 University Boulevard</u> <u>Manassas, Virginia 20110-2209</u> <u>United States of America</u>	
Date of deposit <u>12 January 1998</u>	Accession Number <u>209578</u>
<b>C. ADDITIONAL INDICATIONS</b> (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
<b>D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE</b> (if the indications are not for all designated States) <u>Europe</u> In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC). Continued on the Attached Pages 2 & 3	
<b>E. SEPARATE FURNISHING OF INDICATIONS</b> (leave blank if not applicable) The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")          	
<b>For receiving Office use only:</b> <input type="checkbox"/> This sheet was received with the international application.  Authorized officer   	<b>For International Bureau use only</b> <input type="checkbox"/> This sheet was received by the International Bureau on:  Authorized officer   

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**ATCC Deposit No. 209578****Page 2****CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

**NORWAY**

The applicant hereby requests that the application has been laid open to public inspection (by the Norwegian Patent Office), or has been finally decided upon by the Norwegian Patent Office without having been laid open inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Norwegian Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Norwegian Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on the list of recognized experts drawn up by the Norwegian Patent Office or any person approved by the applicant in the individual case.

**AUSTRALIA**

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**FINLAND**

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

**UNITED KINGDOM**

The applicant hereby requests that the furnishing of a sample of a microorganism shall only be made available to an expert. The request to this effect must be filed by the applicant with the International Bureau before the completion of the technical preparations for the international publication of the application.

ATCC Deposit No. 209578

Page 3

**DENMARK**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

**SWEDEN**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Swedish Patent Office), or has been finally decided upon by the Swedish Patent Office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the International Bureau before the expiration of 16 months from the priority date (preferably on the Form PCT/RO/134 reproduced in annex Z of Volume I of the PCT Applicant's Guide). If such a request has been filed by the applicant any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Swedish Patent Office or any person approved by an applicant in the individual case.

**NETHERLANDS**

The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.

Applicant's or agent's file reference number	PA005PCT	International application No.	UNASSIGNED
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## INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13 bis)

A. The indications made below relate to the microorganism referred to in the description on page <u>311</u> , line <u>N/A</u>	
B. IDENTIFICATION OF DEPOSIT Further deposits are identified on an additional sheet <input checked="" type="checkbox"/>	
Name of depositary institution American Type Culture Collection	
Address of depositary institution (including postal code and country) 10801 University Boulevard Manassas, Virginia 20110-2209 United States of America	
Date of deposit 16 July 1998	Accession Number 203067
C. ADDITIONAL INDICATIONS (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE (if the indications are not for all designated States)	
Europe In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC). Continued on the Attached Pages 2 & 3	
E. SEPARATE FURNISHING OF INDICATIONS (leave blank if not applicable)	
The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")	

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**ATCC Deposit No. 203067****Page 2****CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

**NORWAY**

The applicant hereby requests that the application has been laid open to public inspection (by the Norwegian Patent Office), or has been finally decided upon by the Norwegian Patent Office without having been laid open inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Norwegian Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Norwegian Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on the list of recognized experts drawn up by the Norwegian Patent Office or any person approved by the applicant in the individual case.

**AUSTRALIA**

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**FINLAND**

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

**UNITED KINGDOM**

The applicant hereby requests that the furnishing of a sample of a microorganism shall only be made available to an expert. The request to this effect must be filed by the applicant with the International Bureau before the completion of the technical preparations for the international publication of the application.

ATCC Deposit No. 203067

Page 3

**DENMARK**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

**SWEDEN**

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**NETHERLANDS**

The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.



Applicant's or agent's file reference number	PA005PCT	International application No.	UNASSIGNED
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## INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13 bis)

<b>A.</b> The indications made below relate to the microorganism referred to in the description on page <u>311</u> , line <u>N/A</u>	
<b>B. IDENTIFICATION OF DEPOSIT</b> Further deposits are identified on an additional sheet <input checked="" type="checkbox"/>	
Name of depositary institution American Type Culture Collection	
Address of depositary institution (including postal code and country) 10801 University Boulevard Manassas, Virginia 20110-2209 United States of America	
Date of deposit 16 July 1998	Accession Number 203068
<b>C. ADDITIONAL INDICATIONS</b> (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
<b>D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE</b> (if the indications are not for all designated States)	
Europe In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC). Continued on the Attached Pages 2 & 3	
<b>E. SEPARATE FURNISHING OF INDICATIONS</b> (leave blank if not applicable)	
The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g. "Accession Number of Deposit")	
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**ATCC Deposit No. 203068****Page 2****CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

**NORWAY**

The applicant hereby requests that the application has been laid open to public inspection (by the Norwegian Patent Office), or has been finally decided upon by the Norwegian Patent Office without having been laid open inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Norwegian Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Norwegian Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on the list of recognized experts drawn up by the Norwegian Patent Office or any person approved by the applicant in the individual case.

**AUSTRALIA**

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**FINLAND**

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

**UNITED KINGDOM**

The applicant hereby requests that the furnishing of a sample of a microorganism shall only be made available to an expert. The request to this effect must be filed by the applicant with the International Bureau before the completion of the technical preparations for the international publication of the application.

ATCC Deposit No. 203068

Page 3

**DENMARK**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

**SWEDEN**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Swedish Patent Office), or has been finally decided upon by the Swedish Patent Office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the International Bureau before the expiration of 16 months from the priority date (preferably on the Form PCT/RO/134 reproduced in annex Z of Volume I of the PCT Applicant's Guide). If such a request has been filed by the applicant any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Swedish Patent Office or any person approved by a applicant in the individual case.

**NETHERLANDS**

The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.

Applicant's or agent's file reference number	PA005PCT	International application No.	UNASSIGNED
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## INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13 bis)

<b>A.</b> The indications made below relate to the microorganism referred to in the description on page <u>311</u> , line <u>N/A</u>	
<b>B. IDENTIFICATION OF DEPOSIT</b> Further deposits are identified on an additional sheet <input checked="" type="checkbox"/>	
Name of depositary institution American Type Culture Collection	
Address of depositary institution (including postal code and country) 10801 University Boulevard Manassas, Virginia 20110-2209 United States of America	
Date of deposit 01 February 1999	Accession Number 203609
<b>C. ADDITIONAL INDICATIONS</b> (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
<b>D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE</b> (if the indications are not for all designated States)	
Europe In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC). Continued on the Attached Pages 2 & 3	
<b>E. SEPARATE FURNISHING OF INDICATIONS</b> (leave blank if not applicable)	
The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")	

<b>For receiving Office use only</b>	<b>For International Bureau use only</b>
<input type="checkbox"/> This sheet was received with the international application	<input type="checkbox"/> This sheet was received by the International Bureau on:
Authorized officer	Authorized officer

ATCC Deposit No. 203609

Page 2

**CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

**NORWAY**

The applicant hereby requests that the application has been laid open to public inspection (by the Norwegian Patent Office), or has been finally decided upon by the Norwegian Patent Office without having been laid open inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Norwegian Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Norwegian Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on the list of recognized experts drawn up by the Norwegian Patent Office or any person approved by the applicant in the individual case.

**AUSTRALIA**

The applicant hereby gives notice that the furnishing of a sample of a microorganism shall only be effected prior to the grant of a patent, or prior to the lapsing, refusal or withdrawal of the application, to a person who is a skilled addressee without an interest in the invention (Regulation 3.25(3) of the Australian Patents Regulations).

**FINLAND**

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

**UNITED KINGDOM**

The applicant hereby requests that the furnishing of a sample of a microorganism shall only be made available to an expert. The request to this effect must be filed by the applicant with the International Bureau before the completion of the technical preparations for the international publication of the application.

ATCC Deposit No. 203609

Page 3

**DENMARK**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

**SWEDEN**

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**NETHERLANDS**

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Applicant's or agent's file reference number	PA005PCT	International application No.	UNASSIGNED
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## INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13 bis)

<b>A.</b> The indications made below relate to the microorganism referred to in the description on page <u>311</u> , line <u>N/A</u>	
<b>B. IDENTIFICATION OF DEPOSIT</b> Further deposits are identified on an additional sheet <input checked="" type="checkbox"/>	
Name of depositary institution <u>American Type Culture Collection</u>	
Address of depositary institution (including postal code and country) <u>10801 University Boulevard</u> <u>Manassas, Virginia 20110-2209</u> <u>United States of America</u>	
Date of deposit <u>01 February 1999</u>	Accession Number <u>203610</u>
<b>C. ADDITIONAL INDICATIONS</b> (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
<b>D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE</b> (if the indications are not for all designated States)	
<u>Europe</u> In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC). Continued on the Attached Pages 2 & 3	
<b>E. SEPARATE FURNISHING OF INDICATIONS</b> (leave blank if not applicable)	
The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")     	
<b>For receiving Office use only</b> <input type="checkbox"/> This sheet was received with the international application.  Authorized officer	<b>For International Bureau use only</b> <input type="checkbox"/> This sheet was received by the International Bureau on:  Authorized officer

Form PCT/RO/134 (July 1992)

ATCC Deposit No. 203610

Page 2

**CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

**NORWAY**

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**AUSTRALIA**

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**FINLAND**

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

**UNITED KINGDOM**

The applicant hereby requests that the furnishing of a sample of a microorganism shall only be made available to an expert. The request to this effect must be filed by the applicant with the International Bureau before the completion of the technical preparations for the international publication of the application.



ATCC Deposit No. 203610

Page 3

**DENMARK**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

**SWEDEN**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Swedish Patent Office), or has been finally decided upon by the Swedish Patent Office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the International Bureau before the expiration of 16 months from the priority date (preferably on the Form PCT/RO/134 reproduced in annex Z of Volume I of the PCT Applicant's Guide). If such a request has been filed by the applicant any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Swedish Patent Office or any person approved by a applicant in the individual case.

**NETHERLANDS**

The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.

Applicant's or agent's file reference number	PA005PCT	International application No.	UNASSIGNED
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## INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13 bis)

A. The indications made below relate to the microorganism referred to in the description on page <u>311</u> , line <u>N/A</u>	
B. IDENTIFICATION OF DEPOSIT Further deposits are identified on an additional sheet <input checked="" type="checkbox"/>	
Name of depositary institution American Type Culture Collection	
Address of depositary institution (including postal code and country) 10801 University Boulevard Manassas, Virginia 20110-2209 United States of America	
Date of deposit 17 November 1998	Accession Number 203485
C. ADDITIONAL INDICATIONS (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE (if the indications are not for all designated States)	
Europe In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC). Continued on the Attached Pages 2 & 3	
E. SEPARATE FURNISHING OF INDICATIONS (leave blank if not applicable)	
The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")	

For receiving Office use only	For International Bureau use only
<input type="checkbox"/> This sheet was received with the international application	<input type="checkbox"/> This sheet was received by the International Bureau on:
Authorized officer	Authorized officer

Form PCT/RO/134 (July 1992)

**ATCC Deposit No. 203485****Page 2****CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

**NORWAY**

The applicant hereby requests that the application has been laid open to public inspection (by the Norwegian Patent Office), or has been finally decided upon by the Norwegian Patent Office without having been laid open inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Norwegian Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Norwegian Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on the list of recognized experts drawn up by the Norwegian Patent Office or any person approved by the applicant in the individual case.

**AUSTRALIA**

The applicant hereby gives notice that the furnishing of a sample of a microorganism shall only be effected prior to the grant of a patent, or prior to the lapsing, refusal or withdrawal of the application, to a person who is a skilled addressee without an interest in the invention (Regulation 3.25(3) of the Australian Patents Regulations).

**FINLAND**

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

**UNITED KINGDOM**

The applicant hereby requests that the furnishing of a sample of a microorganism shall only be made available to an expert. The request to this effect must be filed by the applicant with the International Bureau before the completion of the technical preparations for the international publication of the application.

**ATCC Deposit No. 203485****Page 3****DENMARK**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

**SWEDEN**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Swedish Patent Office), or has been finally decided upon by the Swedish Patent Office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the International Bureau before the expiration of 16 months from the priority date (preferably on the Form PCT/RO/134 reproduced in annex Z of Volume I of the PCT Applicant's Guide). If such a request has been filed by the applicant any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Swedish Patent Office or any person approved by a applicant in the individual case.

**NETHERLANDS**

The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.

Applicant's or agent's file reference number	PA005PCT	International application No.	UNASSIGNED
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## INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13 bis)

<b>A.</b> The indications made below relate to the microorganism referred to in the description on page <u>311</u> , line <u>N/A</u>	
<b>B. IDENTIFICATION OF DEPOSIT</b> Further deposits are identified on an additional sheet <input checked="" type="checkbox"/>	
Name of depositary institution American Type Culture Collection	
Address of depositary institution (including postal code and country) 10801 University Boulevard Manassas, Virginia 20110-2209 United States of America	
Date of deposit 18 June 1999	Accession Number PTA-252
<b>C. ADDITIONAL INDICATIONS</b> (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
<b>D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE</b> (if the indications are not for all designated States)	
Europe In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC). Continued on the Attached Pages 2 & 3	
<b>E. SEPARATE FURNISHING OF INDICATIONS</b> (leave blank if not applicable)	
The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")     	
<b>For receiving Office use only</b> <input type="checkbox"/> This sheet was received with the international application  Authorized officer	<b>For International Bureau use only</b> <input type="checkbox"/> This sheet was received by the International Bureau on:  Authorized officer

**ATCC Deposit No. PTA-252****Page 2****CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

**NORWAY**

The applicant hereby requests that the application has been laid open to public inspection (by the Norwegian Patent Office), or has been finally decided upon by the Norwegian Patent Office without having been laid open inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Norwegian Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Norwegian Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on the list of recognized experts drawn up by the Norwegian Patent Office or any person approved by the applicant in the individual case.

**AUSTRALIA**

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**FINLAND**

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

**UNITED KINGDOM**

The applicant hereby requests that the furnishing of a sample of a microorganism shall only be made available to an expert. The request to this effect must be filed by the applicant with the International Bureau before the completion of the technical preparations for the international publication of the application.

ATCC Deposit No. PTA-252

Page 3

**DENMARK**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

**SWEDEN**

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**NETHERLANDS**

The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.

Applicant's or agent's file reference number	PA005PCT	International application No.	UNASSIGNED
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## INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13 bis)

A. The indications made below relate to the microorganism referred to in the description on page <u>311</u> , line <u>N/A</u>	
B. IDENTIFICATION OF DEPOSIT Further deposits are identified on an additional sheet <input checked="" type="checkbox"/>	
Name of depositary institution American Type Culture Collection	
Address of depositary institution (including postal code and country) 10801 University Boulevard Manassas, Virginia 20110-2209 United States of America	
Date of deposit 18 June 1999	Accession Number PTA-253
C. ADDITIONAL INDICATIONS (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE (if the indications are not for all designated States) Europe In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC). Continued on the Attached Pages 2 & 3	
E. SEPARATE FURNISHING OF INDICATIONS (leave blank if not applicable) The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")	
For receiving Office use only <input type="checkbox"/> This sheet was received with the international application Authorized officer	For International Bureau use only <input type="checkbox"/> This sheet was received by the International Bureau on: Authorized officer



**ATCC Deposit No. PTA-253****Page 2****CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

**NORWAY**

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**AUSTRALIA**

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**FINLAND**

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**UNITED KINGDOM**

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ATCC Deposit No. PTA-253

Page 3

**DENMARK**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

**SWEDEN**

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**NETHERLANDS**

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Applicant's or agent's file reference number	PA005PCT	International application No.	UNASSIGNED
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## INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13 bis)

<b>A.</b> The indications made below relate to the microorganism referred to in the description on page <u>311</u> , line <u>N/A</u>	
<b>B. IDENTIFICATION OF DEPOSIT</b> Further deposits are identified on an additional sheet <input checked="" type="checkbox"/>	
Name of depositary institution American Type Culture Collection	
Address of depositary institution (including postal code and country) 10801 University Boulevard Manassas, Virginia 20110-2209 United States of America	
Date of deposit 28 October 1999	Accession Number PTA-881
<b>C. ADDITIONAL INDICATIONS</b> (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
<b>D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE</b> (if the indications are not for all designated States)	
Europe In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC). Continued on the Attached Pages 2 & 3	
<b>E. SEPARATE FURNISHING OF INDICATIONS</b> (leave blank if not applicable)	
The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")          	

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**ATCC Deposit No. PTA-881****Page 2****CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

**NORWAY**

The applicant hereby requests that the application has been laid open to public inspection (by the Norwegian Patent Office), or has been finally decided upon by the Norwegian Patent Office without having been laid open inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Norwegian Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Norwegian Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on the list of recognized experts drawn up by the Norwegian Patent Office or any person approved by the applicant in the individual case.

**AUSTRALIA**

The applicant hereby gives notice that the furnishing of a sample of a microorganism shall only be effected prior to the grant of a patent, or prior to the lapsing, refusal or withdrawal of the application, to a person who is a skilled addressee without an interest in the invention (Regulation 3.25(3) of the Australian Patents Regulations).

**FINLAND**

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

**UNITED KINGDOM**

The applicant hereby requests that the furnishing of a sample of a microorganism shall only be made available to an expert. The request to this effect must be filed by the applicant with the International Bureau before the completion of the technical preparations for the international publication of the application.

ATCC Deposit No. PTA-881

Page 3

**DENMARK**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

**SWEDEN**

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**NETHERLANDS**

The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.

Applicant's or agent's file reference number	PA005PCT	International application No.	UNASSIGNED
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## INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13 bis)

<b>A.</b> The indications made below relate to the microorganism referred to in the description on page <u>311</u> , line <u>N/A</u>	
<b>B. IDENTIFICATION OF DEPOSIT</b> Further deposits are identified on an additional sheet <input type="checkbox"/>	
Name of depositary institution <u>American Type Culture Collection</u>	
Address of depositary institution (including postal code and country) <u>10801 University Boulevard</u> <u>Manassas, Virginia 20110-2209</u> <u>United States of America</u>	
Date of deposit <u>28 October 1999</u>	Accession Number <u>PTA-882</u>
<b>C. ADDITIONAL INDICATIONS</b> (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
<b>D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE</b> (if the indications are not for all designated States)	
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**ATCC Deposit No. PTA-882****Page 2****CANADA**

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**ATCC Deposit No. PTA-882****Page 3****DENMARK**

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*What Is Claimed Is:*

1. An isolated nucleic acid molecule comprising a polynucleotide having a nucleotide sequence at least 95% identical to a sequence selected from the group consisting of:

(a) a polynucleotide fragment of SEQ ID NO:X which is hybridizable to SEQ ID NO:X;

(b) a polynucleotide encoding a polypeptide fragment of SEQ ID NO:Y which is hybridizable to SEQ ID NO:X;

(c) a polynucleotide encoding a polypeptide domain of SEQ ID NO:Y which is hybridizable to SEQ ID NO:X;

(d) a polynucleotide encoding a polypeptide epitope of SEQ ID NO:Y which is hybridizable to SEQ ID NO:X;

(e) a polynucleotide encoding a polypeptide of SEQ ID NO:Y which is hybridizable to SEQ ID NO:X, having biological activity;

(f) a polynucleotide which is a variant of SEQ ID NO:X;

(g) a polynucleotide which is an allelic variant of SEQ ID NO:X;

(h) a polynucleotide which encodes a species homologue of the SEQ ID NO:Y;

(i) a polynucleotide capable of hybridizing under stringent conditions to any one of the polynucleotides specified in (a)-(h), wherein said polynucleotide does not hybridize under stringent conditions to a nucleic acid molecule having a nucleotide sequence of only A residues or of only T residues.

2. The isolated nucleic acid molecule of claim 1, wherein the polynucleotide fragment comprises a nucleotide sequence encoding a protein.

3. The isolated nucleic acid molecule of claim 1, wherein the polynucleotide fragment comprises a nucleotide sequence encoding the sequence identified as SEQ ID NO:Y, which is hybridizable to SEQ ID NO:X.

4. The isolated nucleic acid molecule of claim 1, wherein the polynucleotide fragment comprises the entire nucleotide sequence of SEQ ID NO:X, which is hybridizable to SEQ ID NO:X.

5. The isolated nucleic acid molecule of claim 2, wherein the nucleotide sequence comprises sequential nucleotide deletions from either the C-terminus or the N-terminus.

6. The isolated nucleic acid molecule of claim 3, wherein the nucleotide sequence comprises sequential nucleotide deletions from either the C-terminus or the N-terminus.

7. A recombinant vector comprising the isolated nucleic acid molecule of claim 1.

8. A method of making a recombinant host cell comprising the isolated nucleic acid molecule of claim 1.

9. A recombinant host cell produced by the method of claim 8.

10. The recombinant host cell of claim 9 comprising vector sequences.

11. An isolated polypeptide comprising an amino acid sequence at least 95% identical to a sequence selected from the group consisting of:

- (a) a polypeptide fragment of SEQ ID NO:Y;
- (b) a polypeptide fragment of SEQ ID NO:Y, having biological activity;
- (c) a polypeptide domain of SEQ ID NO:Y;
- (d) a polypeptide epitope of SEQ ID NO:Y;
- (e) a full length protein of SEQ ID NO:Y;
- (f) a variant of SEQ ID NO:Y;
- (g) an allelic variant of SEQ ID NO:Y; or
- (h) a species homologue of the SEQ ID NO:Y.

12. The isolated polypeptide of claim 11, wherein the full length protein comprises sequential amino acid deletions from either the C-terminus or the N-terminus.

13. An isolated antibody that binds specifically to the isolated polypeptide of claim 11.

14. A recombinant host cell that expresses the isolated polypeptide of claim 11.

15. A method of making an isolated polypeptide comprising:

- (a) culturing the recombinant host cell of claim 14 under conditions such that said polypeptide is expressed; and
- (b) recovering said polypeptide.

16. The polypeptide produced by claim 15.

17. A method for preventing, treating, or ameliorating a medical condition, comprising administering to a mammalian subject a therapeutically effective amount of the polypeptide of claim 11 or the polynucleotide of claim 1.

18. A method of diagnosing a pathological condition or a susceptibility to a pathological condition in a subject comprising:

- (a) determining the presence or absence of a mutation in the polynucleotide of claim 1; and
- (b) diagnosing a pathological condition or a susceptibility to a pathological condition based on the presence or absence of said mutation.

19. A method of diagnosing a pathological condition or a susceptibility to a pathological condition in a subject comprising:

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(a) determining the presence or amount of expression of the polypeptide of claim 11 in a biological sample; and

(b) diagnosing a pathological condition or a susceptibility to a pathological condition based on the presence or amount of expression of the polypeptide.

20. A method for identifying a binding partner to the polypeptide of claim 11 comprising:

(a) contacting the polypeptide of claim 11 with a binding partner; and

(b) determining whether the binding partner effects an activity of the polypeptide.

21. The gene corresponding to the cDNA sequence of SEQ ID NO:Y.

22. A method of identifying an activity in a biological assay, wherein the method comprises:

(a) expressing SEQ ID NO:X in a cell;

(b) isolating the supernatant;

(c) detecting an activity in a biological assay; and

(d) identifying the protein in the supernatant having the activity.

23. The product produced by the method of claim 20.